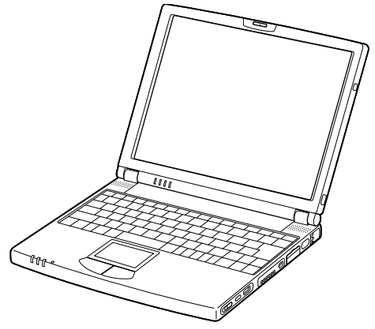
PCG-Z505S/Z505SX (U/C)

PCG-Z505S/Z505SX (U/C)

# PCG-Z505S/Z505SX

## SERVICE MANUAL

*US Model*
*Canadian Model*



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**Information Technology Company**

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Notebook Computer
SONY®

9-928-321-11

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Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100˚C (212˚F) or incinerate.
Dispose of used battery promptly.
Keep away from children.

## Service and Inspection Precautions

### 1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

### 2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the (⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

### 3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires. therefore, be sure to duplicate the original layout.

### 4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

### 5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

### 6. When handling flexible print boards...

• The temperature of the soldering-iron tip should be about 270C.
• Do not apply the tip more than three times to the same pattern.
• Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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SONY

# VAIO® Z505 SuperSlim Pro™ Notebook User Guide

PCG-Z505S/PCG-Z505SX

## Notice to Users

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## Safety Information

### Owner's Record

The model number and serial number are located on the bottom of your Sony VAIO® Z505 SuperSlim Pro™ notebook. Record the serial number in the space provided here. Refer to the model and serial number when you call your Sony Service Center.

Model Number: PCG-Z505S / PCG-Z505SX

Serial Number:_____

**WARNING**

- ❏ To prevent fire or shock hazard, do not expose your notebook computer to rain or moisture.
- ❏ To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
- ❏ Never install modem or telephone wiring during a lightning storm.
- ❏ Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- ❏ Never touch uninsulated telephone wire or terminals unless the telephone line has been disconnected at the network interface.
- ❏ Use caution when installing or modifying telephone lines.

- ❑ Avoid using the modem during an electrical storm.
- ❑ Do not use the modem or a telephone to report a gas leak in the vicinity of the leak.
- ❑ A socket outlet should be as close as possible to the unit and easily accessible.

**AVERTISSEMENT**

- ❑ Pour prévenir tout risque d'incendie ou d'électrocution, garder cet appareil à l'abri de la pluie et de l'humidité.
- ❑ Pour prévenir tout risque d'électrocution, ne pas ouvrir le boîtier. Confier l'entretien de cet appareil exclusivement à un personnel qualifié.
- ❑ L'appareil doit être le plus près possible d'une prise murale pour en faciliter l'accès.

## Regulatory Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❑ Reorient or relocate the receiving antenna.
- ❑ Increase the separation between the equipment and the receiver.
- ❑ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❑ Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product. Operation with non-compliant peripherals is likely to result in interference to radio and television reception.

*Declaration of Conformity*

Trade Name: SONY

Model No: PCG-Z505S/PCG-Z505SX

Responsible Party:
Sony Electronics Inc.

Address:
1 Sony Drive
Park Ridge, NJ 07656

Telephone No.: 201-930-6970

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

All cables used to connect peripherals must be shielded and grounded. Operation with cables, connected to peripherals, that are not shielded and grounded, may result in interference to radio and television reception.

## FCC Part 68

This equipment complies with Part 68 of the FCC rules. On the bottom of this equipment is a label that contains, among other information, the FCC ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

This modem uses the USOC RJ-11 telephone jack.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

If the terminal equipment (Notebook Computer PCG-Z505S/PCG-Z505SX) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operations of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this equipment (Notebook Computer PCG-Z505S/PCG-Z505SX), please contact 1-888-4SONYPC (1-888-476-6972), or write to the Sony Customer Information Center, One Sony Drive, Park Ridge, NJ 07656, for repair and/or warranty information. If the trouble is causing harm to the telephone network, the telephone company may request that you remove the equipment from the network until the problem is resolved.

Repair of this equipment should be made only by a Sony Service Center or Sony authorized agent. For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972).

This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state and possible provincial tariffs. (Contact the state or provincial utility service commission, public service commission, or corporation commission for information.)

## Telephone Consumer Protection Act of 1991 (United States)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual.

In order to program this information into your facsimile machine, see your fax software documentation.

## *Telephone Consumer Guidelines (Canada)*

Please refer to your telephone directory under 'Privacy Issues' and / or 'Terms of Service'. For more detailed information please contact:

CRTC
Terrasses de la Chaudiére, Tour centrale 1 promenade du Portage, 5 étage, Hull PQ K1A 0N2.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la class B est conforme à la norme NMB-003 du Canada.

## *DISPOSAL OF LITHIUM ION BATTERY*

You can return your unwanted lithium ion batteries to your nearest Sony Service Center or Factory Service Center.

In some areas the disposal of lithium ion batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you, call 1-888-476-6972 in the United States or 1-800-961-7669 in Canada.

! **Do not handle damaged or leaking lithium ion batteries.**

**Ne pas manipuler les batteries au lithium-ion qui fuient ou sont endommagées.**

! **Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.**

**Une batterie non conforme présente un danger d'explosion. La remplacer seulement par une batterie identique ou de type équivalent recommandé par le fabricant. Évacuer les batteries usées selon les directives du fabricant.**

**The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 212°F (100°C) or incinerate. Dispose of used battery promptly. Keep away from children.**

**La manutention incorrecte du module de batterie de cet appareil présente un risque d'incendie ou de brûlures chimiques. Ne pas démonter, incinérer ou exposer à une température de plus de 100°C. Évacuer promptement la batterie usée. Garder hors de portée des enfants.**

## *INDUSTRY CANADA NOTICE*

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Equipment malfunctions or any repairs or alterations made by the user to this equipment may give the telecommunications company cause to request that the user disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed 5. The Ringer Equivalence Number for this equipment is 0.4.

## *AVIS DE L'INDUSTRIE CANADA*

AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué.

Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est

particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface.

La terminaison d'une interface téléphonique peut consister en une combination de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5.

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# Welcome

Congratulations on your purchase of the Sony VAIO® Z505 SuperSlim Pro™ notebook. Sony has combined leading-edge technology in audio, video, computing, and communications to provide you with state-of-the-art personal computing.

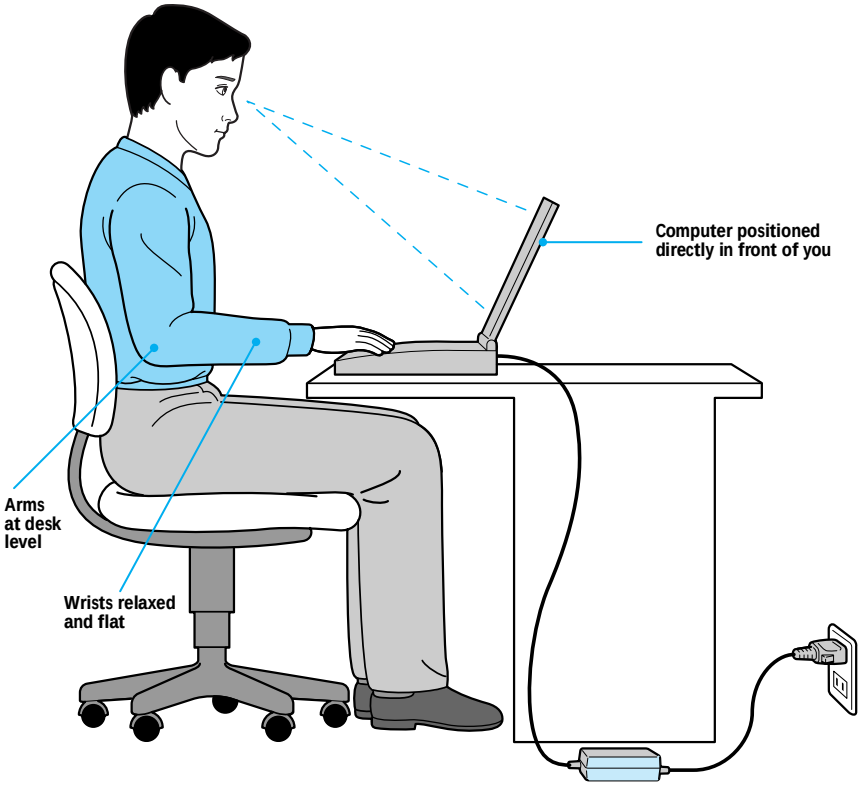
This manual offers a quick introduction and reference to your Sony computer.

- **Using Your Z505 SuperSlim Pro Notebook** shows you how to use the standard components of your system.
- **Connecting Peripheral Devices** explains how you can add functionality by connecting various peripherals.
- **Getting Help** explains the support options available to you, shows you how to use the Sony Customer Support service, and offers basic troubleshooting tips.
- **Notes on Use** provides facts and advice about using your notebook computer.
- **Limited Warranty Statement** provides your product warranty statement and explains how to extend your warranty for an additional nine months.

The online version of the *User Guide* is included with your computer as an electronic document. Additional information on customizing your notebook computer can be found in the electronic document *Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook*. You can access these documents from the Windows Start menu by selecting Programs / VAIO / Documentation.

## Ergonomic Considerations

You will be using your notebook computer as a portable device in a variety of environments. Whenever possible, you should attempt to apply the following ergonomic considerations to both stationary and portable environments.




- **Position of your computer –** Place the computer directly in front of you as you work. Keep your forearms horizontal, with your wrists in a neutral, comfortable position while using the keyboard, touchpad, or external mouse. Let your upper arms hang naturally at your sides. Take breaks during sessions with your computer. Excessive use of the computer may strain muscles or tendons.

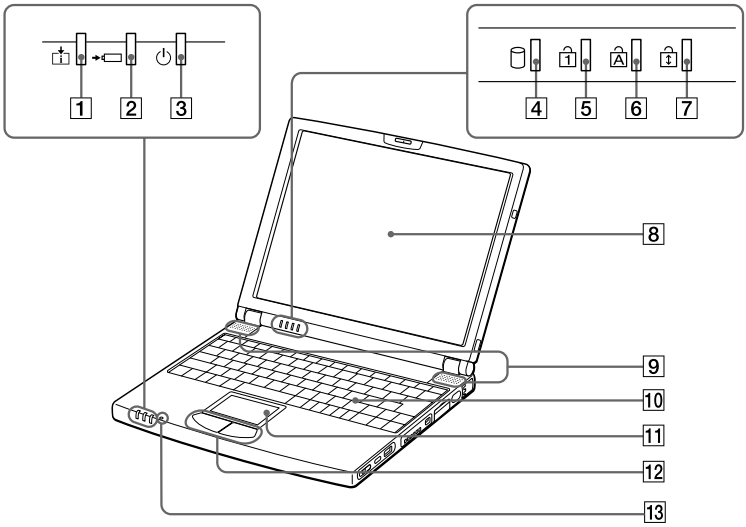
- **Furniture and posture –** Sit in a chair with good back support and armrests. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit in a relaxed, upright posture and avoid slouching forward or leaning far backward.
- **Viewing angle of the computer's display –** Use the display's tilting feature to find the best position. You can reduce eye strain and muscle fatigue by adjusting the tilt of the display to the proper position. Adjust the brightness settings of the display also.
- **Lighting –** Choose a location where windows and lights do not create glare and reflection on the display. Use indirect lighting to avoid bright spots on the display. You can also purchase accessories for your display that help reduce glare. Proper lighting adds to your comfort and work effectiveness.
- **Placement of an external display –** When using an external display, set the display at a comfortable viewing distance. Make sure the display screen is at eye level or slightly lower when you are sitting in front of the monitor.

# *Using Your Z505 SuperSlim Pro Notebook*

This section describes how to start using your computer and how to use your computer's internal and external devices, such as the touchpad and floppy disk drive.

## *Locating the Controls and Connectors*

### *Front*




1 Information indicator (page 20)

2 Battery indicator (pages 11, 20)

3 Power indicator (pages 13, 20)

4 Hard disk drive indicator (page 20)

5 Num Lock indicator (page 20)

6 Caps Lock indicator (page 20)

7 Scroll Lock indicator (page 20)

8 LCD screen (pages 21, 73)

9 Speaker (pages 21, 66)

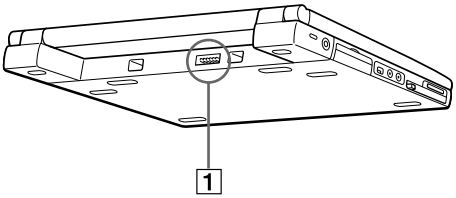
10 Keyboard (page 17)

11 Touchpad (page 23)

12 Left/right button (page 23)

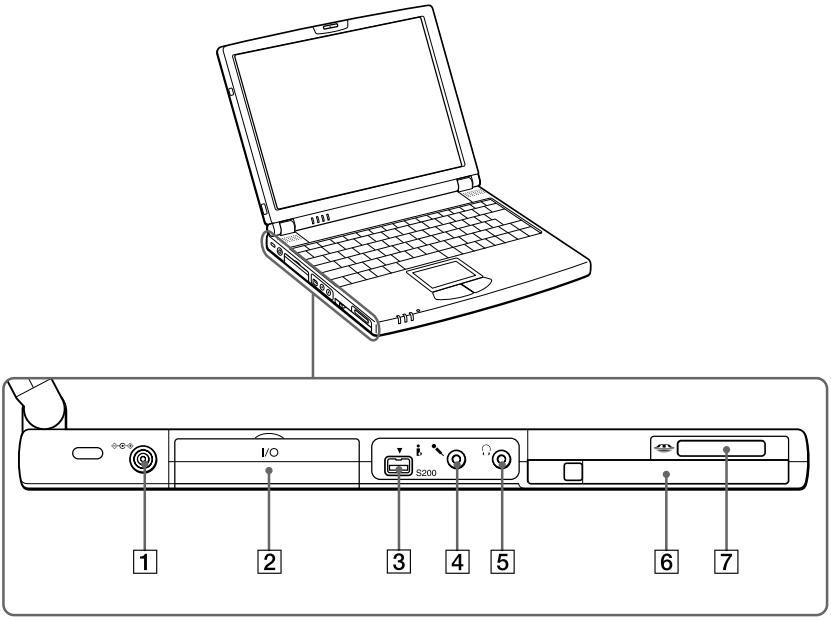
13 Microphone

## Back




1 Battery connector (page 10)

## Left




1 DC In connector (page 9)

2 I/O i.LINK™ port replicator connector (page 41)

3 S200 i.LINK (IEEE-1394) (page 51)

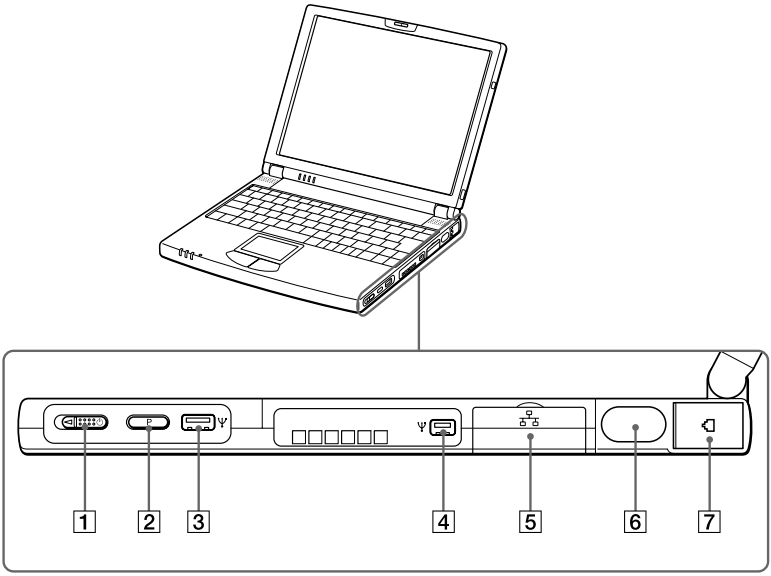
4 Microphone connector

5 Headphone connector (page 45)

6 PC card slot (page 30)

7 Memory Stick™ card slot (page 27)

## Right




1 Power switch (page 13)

2 Programmable Power Key (see the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook)

3 USB connector (page 52)

4 mini USB connector (page 52)

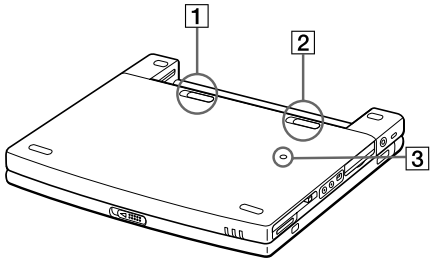
5 Ethernet network connector

6 Infrared port (page 34)

7 Phone line jack (page 40)

The USB connector is disabled when the port replicator is connected.

## Bottom




1 Battery release lever (page 12)

3 Reset switch

2 Battery lock lever (pages 10, 12)

## Connecting a Power Source

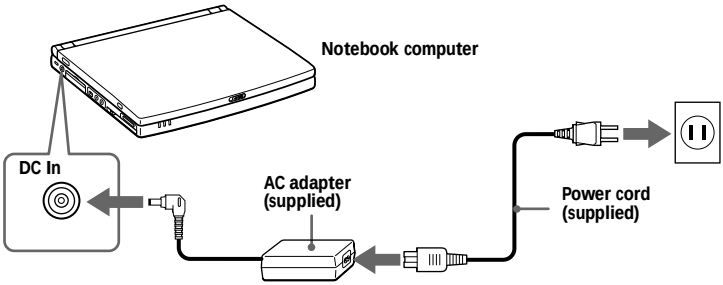
You can use either AC power or a rechargeable battery pack as a power source.

### Using the AC Adapter

1 Plug the cable attached to the AC adapter into the DC In connector on the computer.

2 Plug one end of the power cord into the AC adapter.

3 Plug the other end of the power cord into an AC outlet.



## Using Battery Power

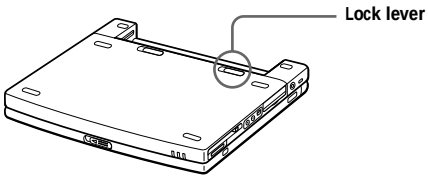
You can use a battery pack as a source of power. The PCGA-BPZ51 battery pack that comes with your computer is not fully charged at the time of purchase. Follow the steps below to insert and charge the battery pack.

You can also purchase the high-capacity PCGA-BPZ52 battery pack as a separate option.

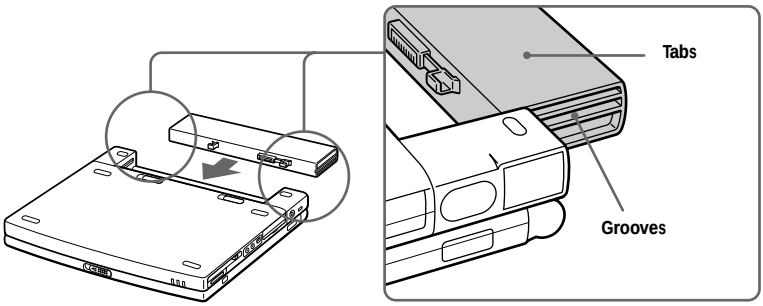
See "Using Power Saving Modes" on page 36 for power management information.

*To insert the battery pack*

1 Move the lock lever on the bottom of the computer to the **UNLOCK** position.




2 Align the grooves and tabs on the battery with the tabs and notches on the back of the computer, and then slide the battery toward the computer until it clicks into place.




3 Slide the lock lever into the **LOCK** position to secure the battery on the computer.

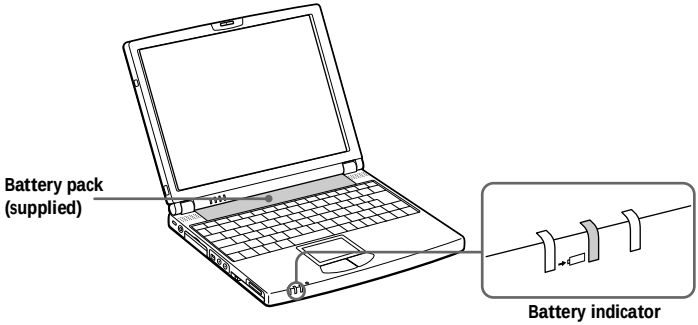
*To charge the battery pack*

1 Connect the AC adapter to the computer.

2 Insert the battery pack.

The computer automatically charges the battery (the battery indicator light flashes in a double blink pattern as the battery charges). When the battery is 85% full, the battery indicator light turns off. This process takes approximately one and one half hours. To charge the battery completely, continue charging for an additional hour.

The battery indicator light on the front of the computer indicates the status of the battery pack.




| *Battery Indicator Light Status* | *Meaning* |
|---|---|
| On | The computer is using battery power. |
| Single blink | The battery is running out of power. |
| Double blink | The battery is charging. |
| Off | The computer is using AC power. |

Both the battery and power indicators blink when the battery is running out of power.

Keep the battery pack in the computer while it is directly connected to AC power. The battery pack continues to charge while you are using the computer.

If your battery level falls to less than 10 percent, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

You can extend battery life by changing the power management modes in the PowerPanel utility. See "Using Power Saving Modes" on page 36.

The battery pack supplied with your computer is a lithium ion battery and can be recharged at any time. Charging a partially discharged battery does not affect battery life.

The battery indicator light is on while you use the battery pack as a power source. When battery life is nearly depleted, the battery indicator starts flashing.

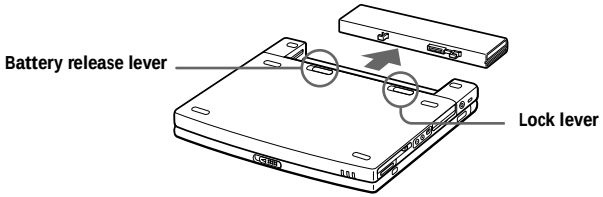
For some software applications and some peripheral devices, your computer may not enter System Hibernation mode when the battery life is low. To avoid loss of data when using battery power, you should save your data frequently and manually activate a power management mode, such as System Suspend or System Hibernation.

*To remove the battery pack*

1 Turn off the computer.

2 Slide the lock lever to the **UNLOCK** position.

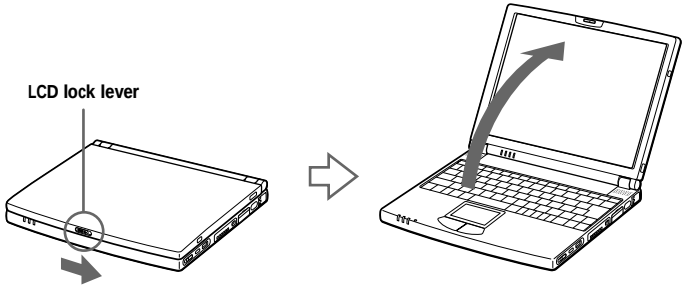
3 Slide the release lever to the **UNLOCK** position and slide the battery away from the computer.



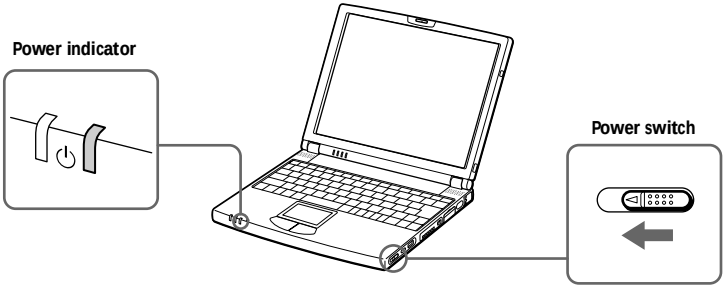

You may lose data if you remove the battery pack while the computer is on and not connected to the AC adapter or if you remove the battery while the computer is in System Suspend mode.

## Starting Your Computer

1 Slide the LCD lock lever in the direction of the arrow, and lift the cover.




2 Slide the power switch on the right side toward the front of the computer until the green power indicator light turns on.




If you hold the power switch in the On position for more than four seconds, the computer turns off.

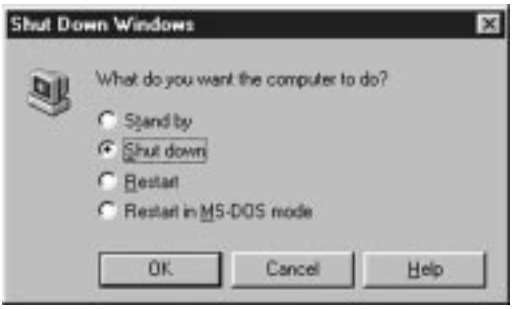
3 If necessary, adjust the brightness controls for the LCD display. To decrease the brightness, press Fn+F5 and then the down or left arrow key. To increase the brightness, press Fn+F5 and then the up or right arrow key.

## Shutting Down Your Computer

! **To avoid potential loss of data, follow these steps to shut down your computer.**

1 Click the Start button on the Windows® 98 taskbar.

2 Click Shut Down at the bottom of the Start menu to display the Shut Down Windows dialog box.




3 Select Shut down.

4 Click OK.

Respond to any prompts warning you to save documents.

5 Wait for your computer to turn off automatically. The power indicator turns off.

6 Turn off any peripherals connected to your computer.

If you are unable to shut down your computer using the steps described above, press the Ctrl+Alt+Delete keys at the same time to restart the computer. If you are unable to restart the computer in this way, you can slide the power switch forward and hold for four seconds. This operation may result in data loss.

During a period of inactivity, you can conserve battery life by using System Suspend mode. See "Controlling Power Management" in the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook.

## Configuring Windows 98

The first time you turn on your computer, you need to complete a few steps to configure the Windows operating system that is already installed on your computer.

> You must configure Windows 98 before you can use the computer.

The on-screen instructions guide you through the configuration process. The following is an overview of the process.

1 Entering information:

- Enter your name.
- Read and accept the License Agreement.
- Enter the product ID number located on the Certificate of Authenticity on the cover of the Microsoft® Windows 98 *Getting Started* manual.

2 Windows 98 setup: Click the Finish button on the Windows 98 Setup Wizard screen.

3 Selecting your computer settings: If necessary, change the Time Zone, Date and Time on the Date/Time Properties screen.

4 Registering your computer: For details on the benefits of registration, see "Registering Your Computer" on page 16. You can also sign up for your 100 free hours of Internet service at this time.

5 Learning about Windows 98: If you wish, take the tour of Windows 98.

## Registering Your Computer

You can take advantage of Sony's commitment to quality customer support and receive the following benefits by registering your computer with Sony:

- **Sony Customer Support –** Talk to a Support Representative to troubleshoot problems you may be having with your computer.
- **Extended Limited Warranty –** Protect your investment. Extend your Warranty nine months for a total of 12 months from the original date of purchase when you register your computer.
- **Express service –** Provides convenient resolution of problems.
- **Free Internet access –** Use the Internet for up to 100 free hours when you sign up with GTE (no credit card necessary). Free access expires 100 hours or 60 days after signing up, whichever occurs first.

If you have not already registered, follow these steps to use your notebook computer's online registration service.

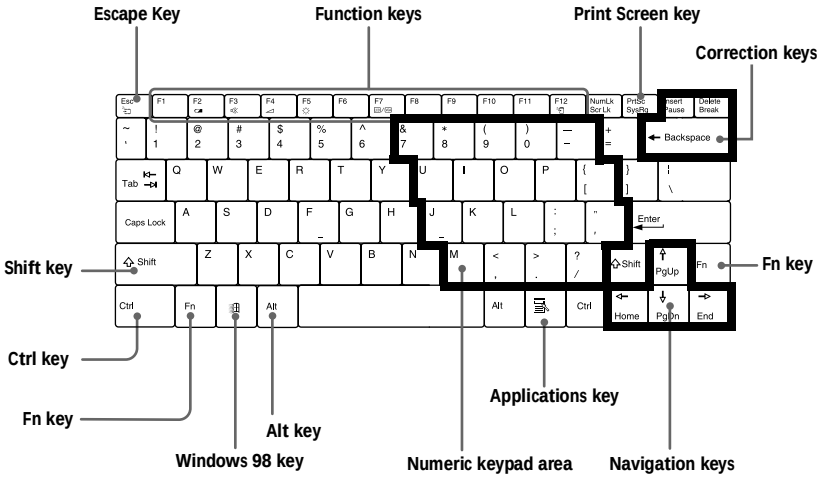
You must connect your phone line before using any online services, including the online registration service. See "Connecting a Phone Line" on page 40.

1. Click the Sony VAIO Registration icon on the VAIO desktop.
2. Enter the information requested on the first online registration form. Press the Tab key to move from box to box.
3. Click the Next button to advance to the next form.
4. Complete the remaining forms by clicking the Next button each time you complete a form.

The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.

## Using the Keyboard

Your keyboard is very similar to a typewriter's, but the keyboard has additional keys that perform specific computer-related tasks.




| *Key* | *Description* |
|---|---|
| Numeric keypad area | Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations such as addition and subtraction. Note that you must press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock light will be on.) |
| Navigation keys | Several keys are devoted to moving the cursor on the screen (the four arrow keys which also function as the Home, End, Page Up, and Page Down keys). |
| Correction keys | The Insert, Back Space, and Delete keys enable you to make corrections in your documents. |
| Function keys | The twelve function keys along the top of the keyboard are used to perform designated tasks. For example, in many applications, F1 is the Help key. The task associated with each function key may vary from one application to the next. |

| *Key* | *Description* |
|---|---|
| Escape key | The Esc (Escape) key is used to cancel commands |
| Print Screen key | The Print Screen key takes an electronic snapshot of the screen and places it in the Windows Clipboard. You can then paste the screen shot into a document and print it. |
| Operator keys | Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many applications, instead of choosing the Save command from a menu, you can hold down Ctrl and press S (referred to as Ctrl+S). The Shift key operates the same way as on a typewriter; it is used to produce capital letters or special symbols such as @ and $. |
| Windows 98 key | The key with the Windows logo displays the Windows 98 Start menu; it is the equivalent of clicking the Start button on the task bar. See “Combinations and Functions with the Windows 98 Key” on page 19. |
| Fn key | The Fn key is used in combination with other keys to issue commands. The Fn keys at the left and right sides both work the same. See “Combinations and Functions with the Fn Key” on page 21. |
| Applications key | The Applications key displays a shortcut menu of context-sensitive choices; pressing this key is the equivalent of clicking the right mouse button. |

## Combinations and Functions with the Windows 98 Key

| Combinations | Functions |
|---|---|
| ⊞ + F1 | Displays Windows Help. |
| ⊞ + Tab | Switches the selected button on the taskbar. |
| ⊞ + E | Displays Windows Explorer. |
| ⊞ + F | Displays the Windows Find: All Files window to find a file or folder. This is the equivalent of selecting Find and then Files or Folders from the Start menu. |
| ⊞ + Ctrl + F | Displays the Windows Find: Computer window where you can locate other computers. This is the equivalent of selecting Find and then Computer from the Start menu. |
| ⊞ + M | Minimizes all displayed windows. |
| Shift + ⊞ + M | Returns all minimized windows to their previous size. |
| ⊞ + R | Displays the Run window. This is the equivalent of selecting Run from the Start menu. |
| Fn + ⊞ + Insert | Displays the Properties window. This is the equivalent of clicking the System icon in the Control Panel. |

## Indicators

| Indicators | Functions |
|---|---|
| Information | Turns on when the PPK Timer is set. Turns off when the PPK Timer is not set or the PPK Timer setting is inactive (such as when the computer's power is off or in System Hibernation mode). |
| Battery | Indicates the status of the battery attached at the rear of the computer. |
| Power | Lights when the power to the computer is turned on. Flashes in System Suspend mode. Turns off when the computer is in System Hibernation mode or powered off. |

| Light | On | Off |
|---|---|---|
| Hard disk | Data is being read from or written to the hard drive. Do not enter System Suspend mode or turn off the computer when this indicator light is on. | The hard drive is not being accessed. |
| Num Lock | The number keys in the numeric keypad are active. | The character keys in the keypad area are active. |
| Caps Lock | The letters appear in uppercase as you type. The Shift key lowers the case of typed letters when Caps Lock is on. | Letters appear in lower case as you type (unless you hold down the Shift key). |
| Scroll Lock | The screen scrolls differently. (Exactly how it scrolls depends on the specific application. It has no effect in many applications.) | Information moves across the display normally. |

## Combinations and Functions with the Fn Key

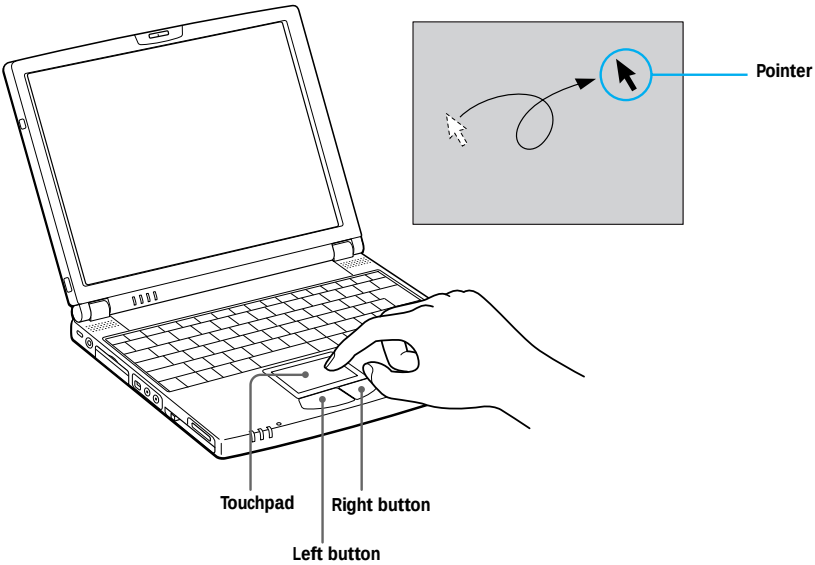
| Combinations/ Feature | Functions |
|---|---|
| Fn+ (ESC) System Suspend | Puts the system into System Suspend mode, a power management state. To return the system to the active state, press any key or press the power switch on your computer. |
| Fn+ (F2) Display power status | Displays the power status, as in the example below: Using AC power Charging the battery |
| Fn+ (F3) Speaker switch | Toggles the built-in speaker off and on. |
| Fn+ (F4) Speaker volume | Adjusts the built-in speaker volume. To increase volume, press Fn+F4, then ↑ or →. To decrease volume, press Fn+F4, then ↓ or ←. |
| Fn+ (F5) Brightness control | Adjusts the brightness of the LCD. To increase light intensity, press Fn+F5 and then ↑ or →. To decrease light intensity, press Fn+F5 and then ↓ or ←. |
| Fn+ LCD / VGA (F7) Switch to the external display | Toggles through the LCD, external display (connected to the Monitor connector on the port replicator) and both LCD and external display. Only LCD → LCD and external display → Only external display → Only LCD |
| Fn+ (F12) System Hibernation | Provides for the lowest level of power consumption. When you execute this command, the state of the system and state of the peripheral devices are written to the hard disk and the system power is turned off. To return the system to the original state, use the power switch to turn on power. |
| Fn+B Mega-Bass switch | Toggles the mega-bass function off and on. This feature is available with headphone only. |
| Fn+D Video standby | Turns off the LCD in order to save power. |

| *Combinations/ Feature* | *Functions* |
|---|---|
| Fn+F<br>Change the display size | Zooms the display size in or out when the display is set to less than maximum resolution. |
| Fn+S<br>System Idle | Puts the system into System Idle mode, a power management state. To return the system to the active state, press any key. |

Some functions are not available until Windows launches.

# Using the Touchpad

The keyboard contains a cursor-pointing device called a touchpad. You can point to, select, drag, and scroll objects on the screen using the built-in touchpad.




| *Actions* | *Descriptions* |
|---|---|
| Point | Slide one finger on the touchpad to place the pointer on an item or object. |
| Click | Press the left button once. |
| Double-click | Press the left button twice. |
| Right-click | Press the right button once. In many applications, this action displays a shortcut menu of context-sensitive choices. |
| Drag | Slide one finger while pressing the left button. |
| Scroll | Move your finger along the right edge of the touchpad to scroll vertically. Move your finger along the bottom edge to scroll horizontally. (The scroll function is available only with applications that support a touchpad scroll feature.) |

See Mouse Help for information on touchpad features, such as clicking both buttons simultaneously, adjusting touchpad speed, Web Assist, Tap Off, and Easy Launcher functions. To access Mouse Help, press the Start button, select Settings, and then select Control Panel. Click the Mouse icon in the Control Panel and click the Help button.

## Using Smart Pad

Smart Pad is an application that lets you create memos by writing on the touchpad using your finger.

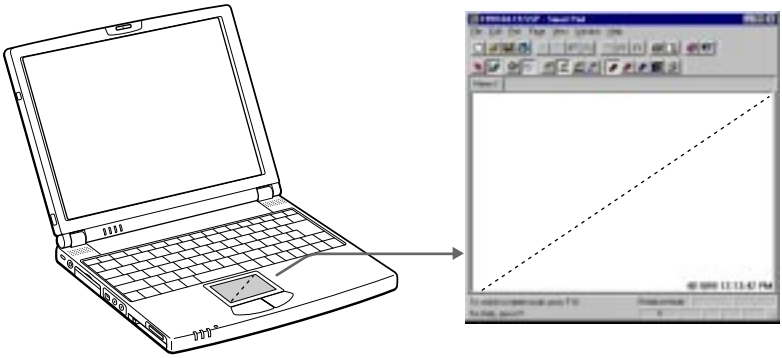
*To use Smart Pad*

1 Click the Start button on the Windows 98 taskbar.

2 Point to Programs, point to Smart Utilities, and then click Smart Pad.

3 Press the F10 key.

Smart Pad enters tablet mode. In this mode the touchpad corresponds with the Smart Pad screen. This means that what you write on the touchpad appears on the screen in the corresponding location. For example, when you write letters on the left corner of the touchpad, the letters appear on the left corner of the screen.



4 To write, move your finger slowly on the touchpad.

As you write, the letters you wrote on the touchpad appear on the screen.

To learn more about Smart Pad, click Help on the Smart Pad screen to display the online help file.

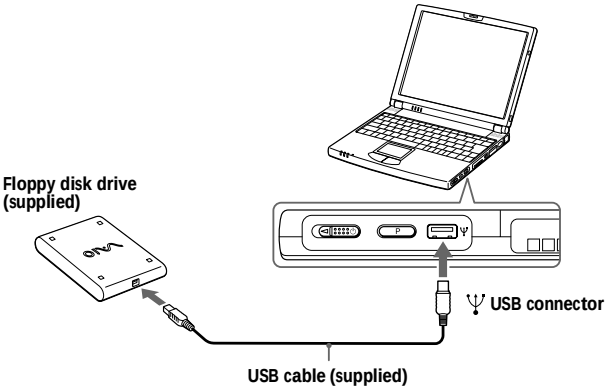
## Using the Floppy Disk Drive

You can connect the floppy disk drive to the ⚲ (USB) connector on your computer:

*To connect the floppy disk drive*

You do not need to shut down the computer before connecting or disconnecting the floppy disk drive.

Plug the USB cable into the ⚲ (USB) connector on the computer and the other end into the USB connector on the floppy disk drive. The VAIO logo on the disk drive should be facing up.

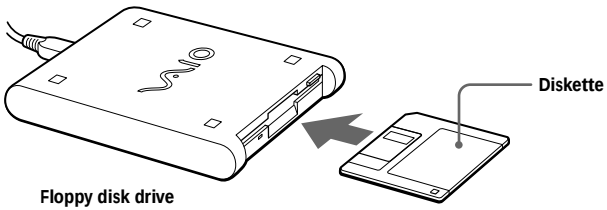



To use another USB device, such as a USB mouse, at the same time, plug it into the ⚲ (mini USB) connector on the right side of the computer by using the supplied conversion adapter.

*To insert a diskette*

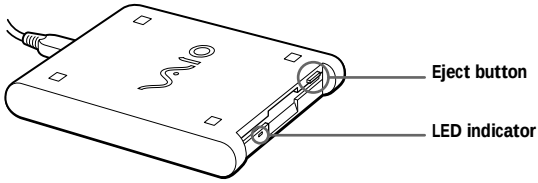
1 Hold the diskette with the label side facing up.

2 Gently push the diskette into the drive until it clicks into place.



*To remove a diskette*

- When you finish using the diskette, wait until the LED indicator turns off and then press the Eject button to remove the diskette.




*To remove the floppy disk drive*

Wait until the LED indicator turns off, and then unplug the USB cable from the computer.

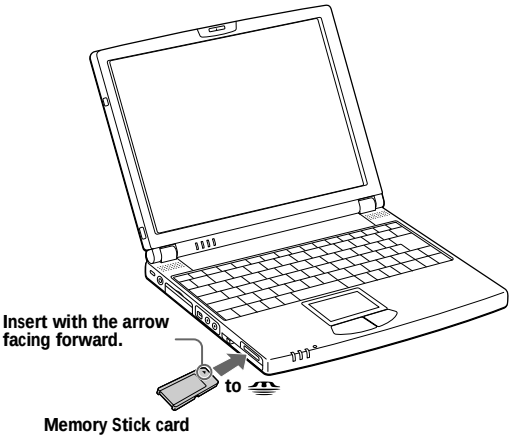
## Using Memory Stick™ Cards

This new compact, portable, and versatile IC recording medium has a data capacity exceeding that of a floppy disk. The card is specially designed for exchanging and sharing digital data with compatible products. Because it is removable, the card can be used for external data storage.

The card slot can accomodate one 4 MB, 8 MB, or 16 MB card.

*To insert a Memory Stick card*

Insert the card into the slot until the card is fixed into the connector.




When the card is connected properly, you can see the contents of the card by clicking the Removable Disk (S:) icon.

Do not insert the card in the wrong direction. It may damage the connector pins in the slot or the card itself.

*To remove a Memory Stick card*

Push the card in toward the computer. When the card comes out, pull it out. The Memory Stick window closes automatically when you remove the card.

When the card's erasure prevention switch is set to LOCK, data cannot be recorded or erased.

Before using cards, you should back up important data.

Wait a minimum of 10 seconds after the card finishes reading or writing data before removing it. If the card is removed prematurely, a blue screen with an error message appears, prompting you to continue or exit. Re-insert the card into the slot and press Enter to continue. This allows the card to finish reading or writing data.

To avoid damaging data, do not:

- Remove a card or turn off the power while reading or writing data.
- Use cards in locations that are subject to static electricity or electrical noise.

Do not touch the card connector with your finger or metallic objects.

Do not attach labels other than the supplied label to a card.

Do not bend, drop, or apply strong shock to cards.

Do not disassemble or modify cards.

Do not allow cards to get wet.

Do not use or store cards in a location that is subject to:

- Extremely high temperatures, such as in a car parked in the sun
- Direct sunlight
- High humidity or places with corrosive substances

To prolong the life of cards, use the supplied storage case.

See the instructions that come with your card for more information on use.

*To create a slide show that launches automatically when you insert a Memory Stick card*

If you want to create a slide show that launches automatically when you insert a card, follow these steps to transfer images from your hard drive to a card.

1 Insert the card into the card slot.

2 Click the My Computer icon on the desktop.

3 Click the Removable Disk S: icon.

4 Create a new folder and name it "DCIM."

5 Open the DCIM folder and create a new folder named "100MSDCF."

6 Click the Start button, select VAIO, then click PictureGear to launch the PictureGear application.

7 Select the digital images you want to save in your slide show.

8 From the PictureGear File menu, select Format Conversion.

9 Select Memory Stick as the Output Format.

10 Use the Browse button to select the DCIM / 100MSDCF folder on the Removable Disk (S:) drive.

11 Click OK to save the file.

You can also add MPEG1 video files to your Slide Show by following the steps below. Note that the order in which digital still photos (DSC0xxxx files) and video clips (MOV0xxxx files) appear in your Slide Show is determined by the number (xxxx) in the file name.

1 Insert the card into the card slot.

2 Click the My Computer icon on the desktop.

3 Click the Removable Disk S: icon.

4 Create a new folder and name it "MSSONY."

5 Open the MSSONY folder and create a new folder named "MOML0001."

6 Copy the MPEG file into the MOML0001 folder.

7 Rename the MPEG file MOV0xxxx.mpg, where xxxx is any four-digit number.

## Using PC Cards

Your computer includes a PC card slot. PC cards allow you to connect portable external devices, such as a CD-ROM drive.

The PC card slot can accommodate one Type I or Type II PC card. This slot is compatible with 16 bit card and Card Bus. ZV (Zoomed Video) port is not available.

Some PC cards may require that you disable idle devices when using the PC card. You can use Sony Notebook Setup to disable devices. See "Displaying the Sony Notebook Setup Screen" in the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook for details.

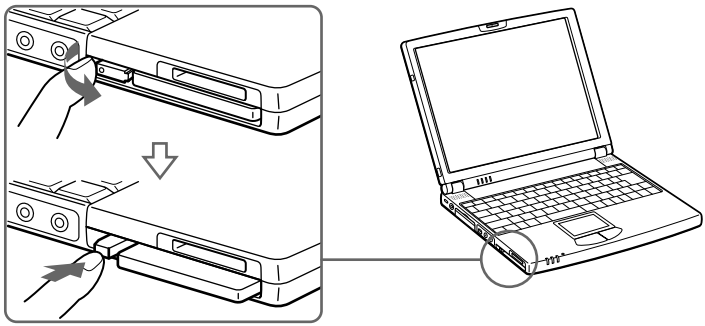
Be sure to use the most recent software driver provided by the PC card manufacturer.

If an "!" mark appears on the Device Manager tab in the System Properties dialog box, remove the software driver and then reinstall it.

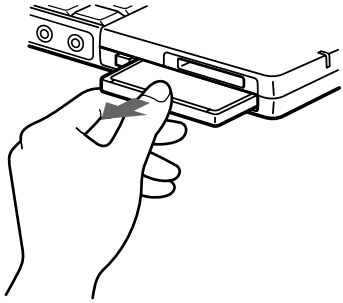
*To insert a PC card*

You do not need to shut down the computer before inserting or removing a PC card.

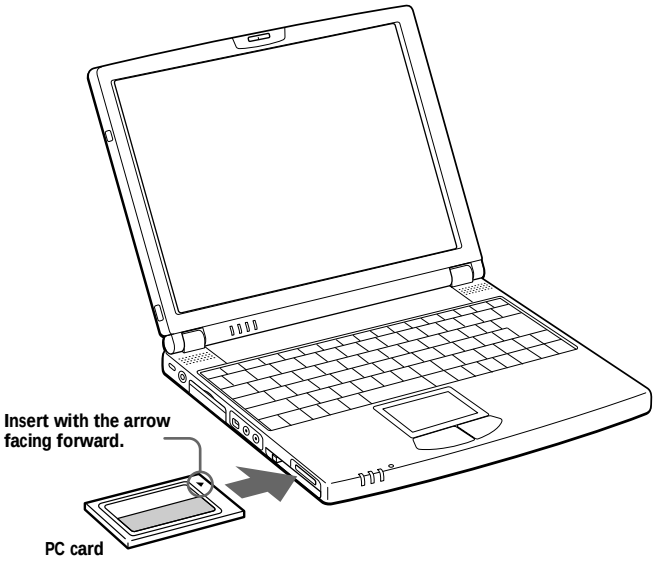
1 Pull the PC card release button up away from the computer and push it in towards the computer.



2 Remove the PC card slot protector.



3 Insert the PC card into the PC card slot, front label facing up. Gently push the card into the slot until the card is fixed into the connector. The release button comes out.




Do not force a card into the slot. It may damage the connector pins.

If you have difficulty inserting a card, check that you are inserting the card with the correct orientation.

See the manual that came with your PC card for more information on its use.

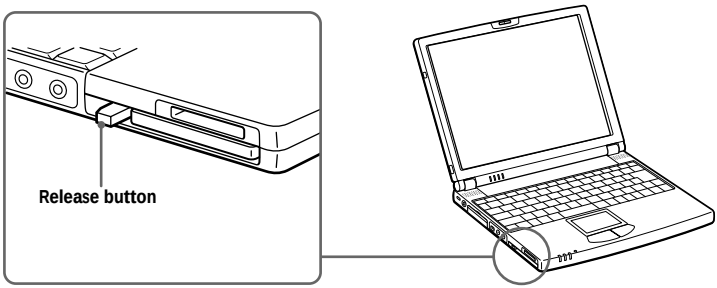
*To remove a PC card*

For some PC cards, if you alternate between normal power operation and the System Suspend or System Hibernation power management modes while the card is inserted, you may find that a device connected to your system is not recognized. Reboot your system to correct the problem.

1 Close any applications that use the PC card. Otherwise data may be lost.

2 Click the PC card icon in the taskbar and close the card.

3 Pull the PC card release button up and press it in towards the computer.

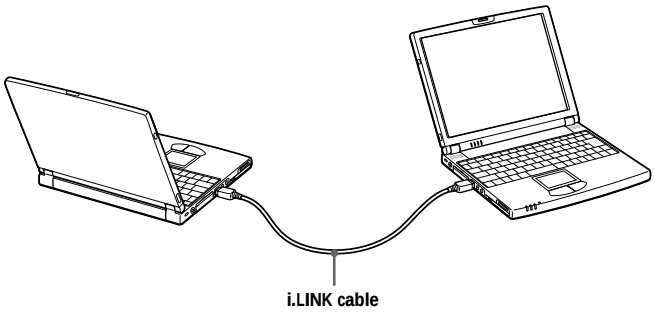



4 Gently grasp the card and pull it out.

5 Insert the PC card slot protector into the empty slot.

## Using Smart Connect

The pre-installed Smart Connect software allows you to use an i.LINK cable (not supplied) to connect your VAIO Z505 SuperSlim Pro notebook to another VAIO computer that also has Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer. See the Smart Connect online help for more information.



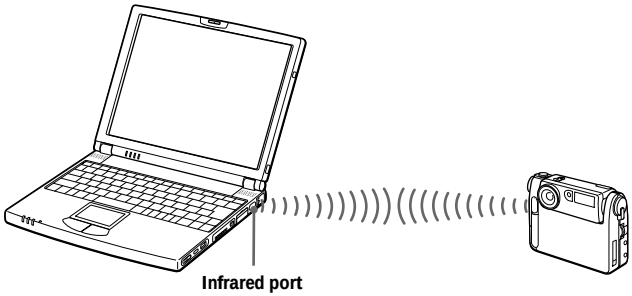

i.LINK cables compatible with your VAIO Z505 SuperSlim Pro notebook include cables with the following part numbers: VMC-IL4415 (a 1.5 meter cable with a 4-pin connector at each end), VMC-IL4435 (a 3.5 meter cable with a 4-pin connector at each end), VMC-IL4615 (a 1.5 meter cable with a 4-pin connector at one end and a 6-pin connector at the other), and VMC-IL4635 (a 3.5 meter cable with a 4-pin connector at one end and a 6-pin connector at the other).

## Using Infrared Communication Devices

Your computer includes an infrared port, located on the right side of the computer. You can use this port to communicate with other infrared-equipped devices with compatible protocols, such as a digital still camera or other computers.

*To use infrared communication with a digital still camera*

Align the infrared ports on the computer and the digital camera so that they are in a direct line.




*To use infrared communication with another computer*

Align the infrared ports on the two computers so that they are in a direct line.

Infrared communication capability can be turned on and off. By default, it is not enabled when your system is shipped. To enable infrared use, click the Infrared icon in the Windows Control Panel, and select the Enable infrared communication checkbox on the Options tab.

You can disable infrared communication when you are not using it to conserve battery life.

Use the Infrared icon in the Windows Control Panel to enable and disable infrared communication. Do not use the icon in the taskbar.

Check the Status tag of the Infrared Monitor in the Windows Control Panel to determine if the infrared device is detected.

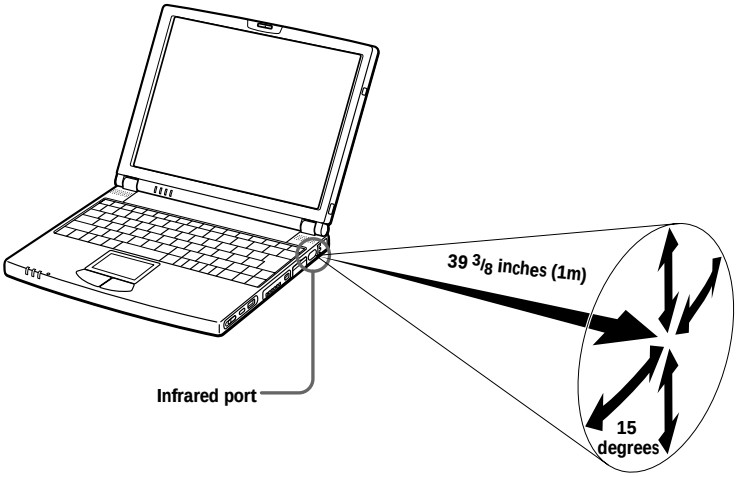
If the two devices are too far apart or too close together, data transfer may be interrupted or there may be noise in the transmission.

Do not cover the infrared ports with your hand or any other objects.

Avoid direct sunlight, fluorescent light, or flashing incandescent light near the infrared ports.

See the manual that came with your digital still camera or other infrared communication device for more information on installation and use.

The active area of infrared transmission extends about 39 $^{3}/_{8}$ inches (1m) with a radius of 15 degrees.



# Using Power Saving Modes

When you use a battery as the source of power for your computer, you can take advantage of power management settings to conserve battery life. In addition to the normal operating mode, which allows you to turn off specific devices, your computer has three distinct power saving modes: System Idle, System Suspend and System Hibernation. When using battery power, you should be aware that the computer automatically enters System Hibernation mode when the remaining battery charge drops below 5%, regardless of the power management setting you select.

If your battery level falls to less than 10%, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

## Normal Mode

This is the normal state of your computer when it is in use. The green power indicator light is on in this mode. To save power, you can turn off a specific device such as the LCD or the hard disk.

For details, see "Controlling Power Management" in the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook.

## System Idle Mode

This mode is convenient if you do not need to use your computer for a brief period. The hard disk and video display enter a low power state, and the CPU clock and processor stop. The power indicator light is tan in this mode.

### *To activate System Idle mode*

Press Fn+S. You can also use the PowerPanel utility to enter System Idle mode.

### *To return to normal mode*

Press any key.

## System Suspend Mode

The computer saves the current state of the system in RAM and switches off power to the CPU. The tan power indicator light flashes in this mode.

*To activate System Suspend mode*

Press Fn+Esc, or you can slide the power switch forward and release the switch immediately. You can also use the PowerPanel utility to enter System Suspend mode.

*To return to normal mode*

Press any key.

## System Hibernation Mode

The state of the system is saved on the hard drive and power is turned off. The power indicator light is off in this mode.

*To activate System Hibernation mode*

Press Fn+F12. You can also use the PowerPanel utility to enter System Hibernation mode.

*To return to normal mode*

Turn on the computer by sliding the power switch forward. The computer returns to its previous state.

> When returning from System Hibernation mode, the system status stored on the hard disk is erased and the computer starts normally if you slide the power switch forward and hold for more than four seconds.

- Time to return to normal mode:

  System Idle requires less time than System Suspend, and System Suspend requires less time than System Hibernation.

- Power consumption:

  System Idle uses more power than System Suspend, and System Suspend uses more power than System Hibernation.

# *Connecting Peripheral Devices*

You can add functionality to your computer by connecting any of these peripherals:

- Phone line (page 40)
- Port replicator (page 41)
  - Printer (page 43)
  - External display (page 44)
  - Desktop computer or serial device (page 46)
- CD-ROM drive (page 48)
- i.LINK device (page 51)
- Universal Serial Bus (USB) device (page 52)
- External display (page 53)

Turn off the computer before connecting peripherals. In normal use, you should turn on the peripherals before turning on the computer. You can connect USB devices while the computer is on.

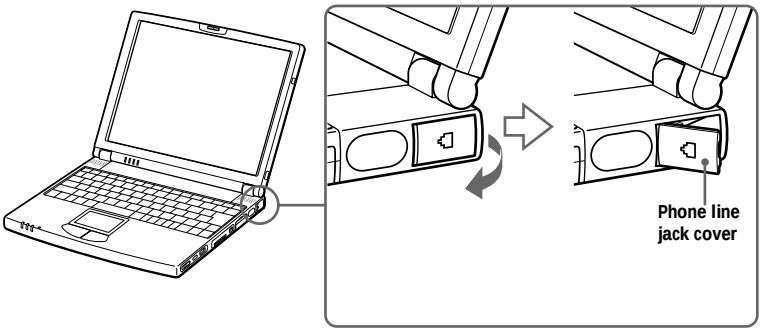
Connect the AC adapter only after connecting all cables.

## Connecting a Phone Line

You need to connect a phone line to take advantage of online services, the Internet, and Sony Customer Support.

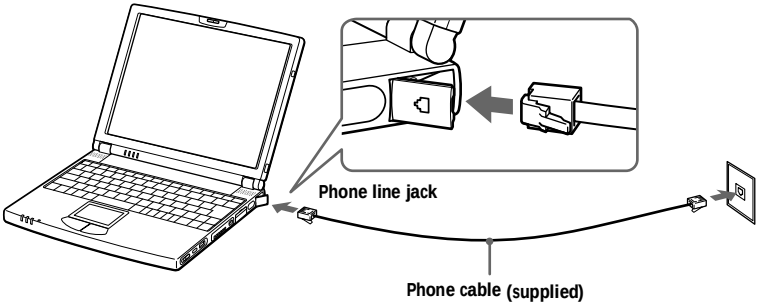
In order to register your Sony VAIO Z505 SuperSlim Pro notebook, register your software online, and use Sony Customer Support, you must connect to a phone line. Also, you must register your computer to receive the extended warranty.

1 Open the phone line jack cover. The cover opens only to a 45 degree angle.




2 Plug one end of the phone cable into the jack on the inside of the phone line jack cover. Make sure you insert the phone cable from the rear of the computer and that the modular jack clicks into place.

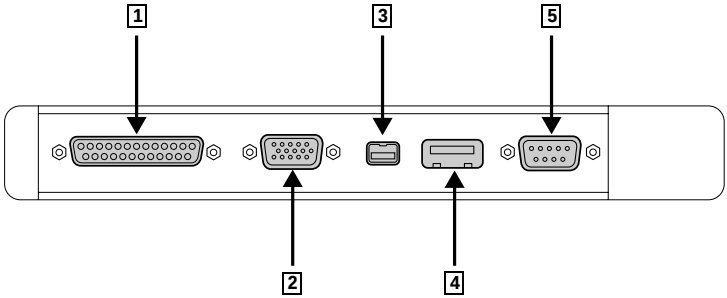
3 Plug the other end into the wall jack.




Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX). Some of these connections might result in excess electrical current and could cause a malfunction in the internal modem.

# Connecting the i.LINK™ Port Replicator

You can use the PCGA-UPR5 i.LINK port replicator (supplied) to connect peripheral devices such as a printer or external display. The port replicator has five ports, including an i.LINK port.




1 Printer (page 43)

2 Monitor (page 44)

3 i.LINK device (page 51)

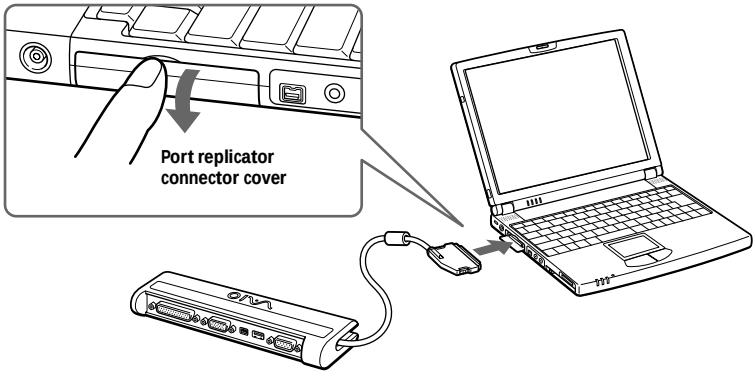
4 USB device (page 52)

5 Serial (page 46)

*To attach the port replicator*

1 Turn off the computer.

2 Open the port replicator connector cover on the left side of the computer.

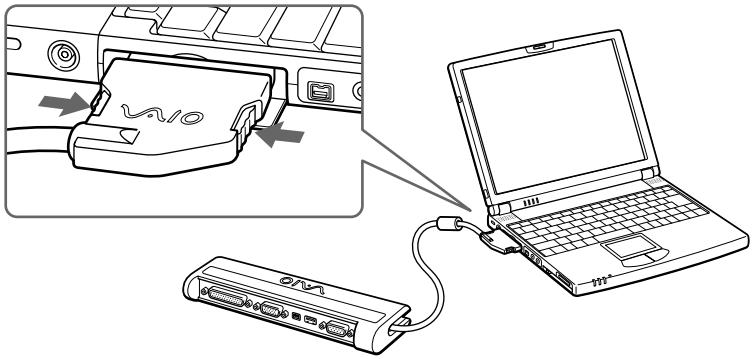



3 Plug the port replicator cable into the port replicator connector on the computer.

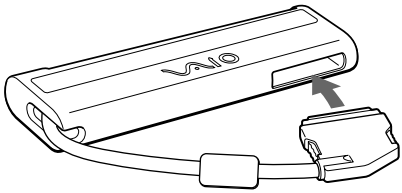
*To remove the port replicator*

1 Turn off the computer.

2 Press both sides of the port replicator cable connector and unplug the cable from the computer.



3 Fold the port replicator cable into the compartment on the side of the port replicator.



You cannot use the optional PCGA-PR5 port replicator with your computer.

When you use the port replicator, your computer's USB connector does not work. Use the mini-USB connector instead.

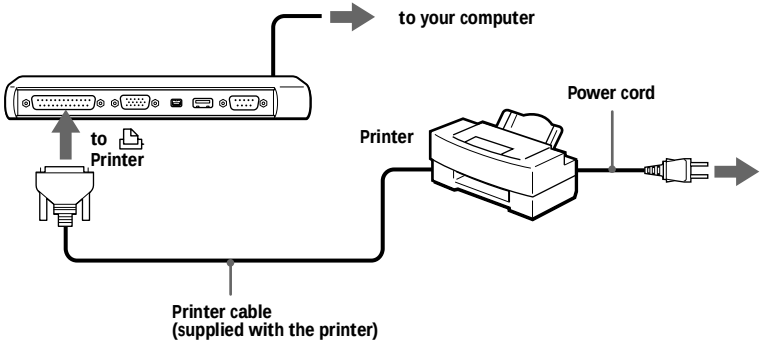
If you do not turn off the computer before removing the port replicator, you must turn off the computer before reattaching the port replicator.

## Connecting a Printer

You can use the port replicator to connect a Windows 98-compatible printer or other parallel port device to your computer.

*To connect a printer*

❑ Use the symbol to locate the Printer connector on the port replicator. Plug the printer cable (supplied with the printer) into this connector.




See the manual that came with your printer for more information on installation and use.

Before using the printer, you may need to change the Printer setting in the Sony Notebook Setup software. See "Displaying the Sony Notebook Setup Screen" in the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook.

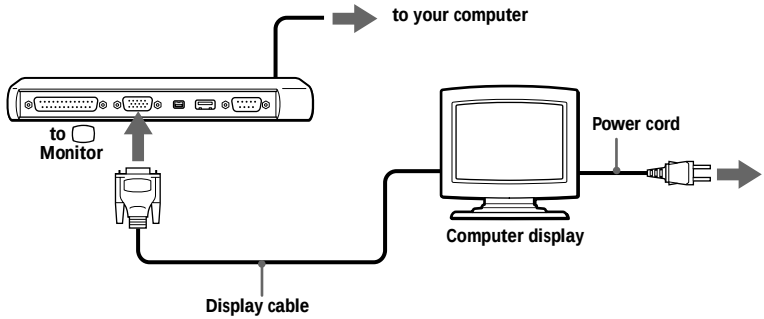
## Connecting an External Display

You can use the port replicator to connect an external display to your notebook computer. For example, you can use the computer with any of the following:

- Computer display (monitor) (page 44)
- Projector (page 45)

*To connect a computer display*

- Use the ⬭ symbol on the port replicator to locate the Monitor connector. Plug the display cable into this connector.
- If necessary, plug one end of the display power cord into the display, and the other end into an AC outlet.




See the manual that came with your computer display for more information on installation and use.

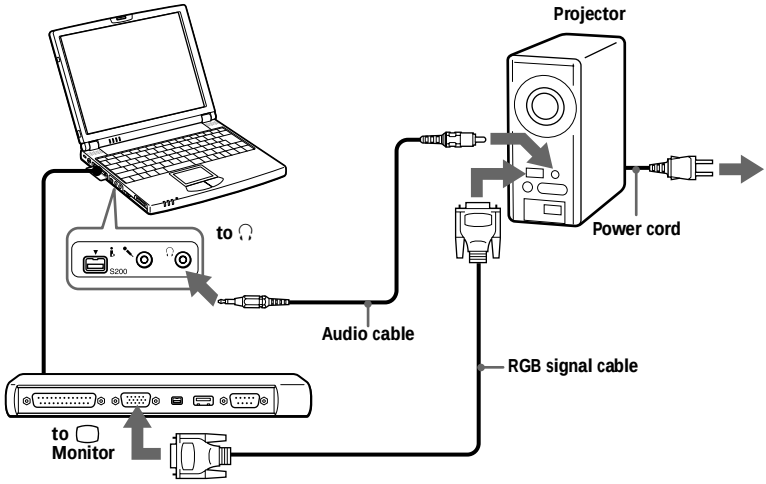
The optional display adapter PCGA-DA5 allows you to connect a display directly to the port replicator connector, eliminating the need for the port replicator.

*To connect a projector*

You can use a projector as an external display, such as the Sony LCD Projector.

1 Use the ▭ symbol to locate the Monitor connector. Plug the RGB signal cable into this connector.

2 Use the 🎧 symbol to locate the Headphone connector. Plug the audio cable into this connector.




✍ See the manual that came with your projector for more information on installation and use.

*To select a display*

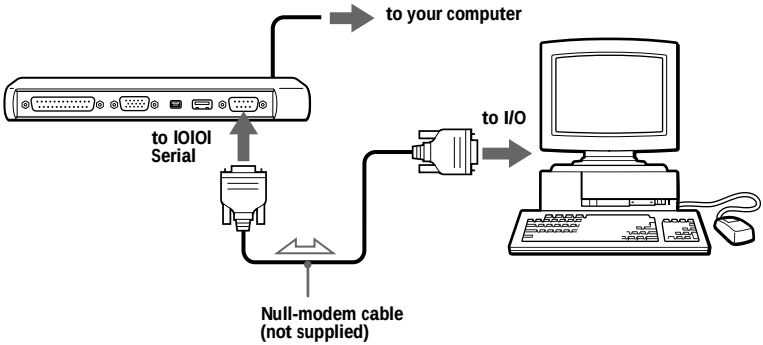
When you connect an external display to the monitor connector, you can press Fn+F7 to toggle the output between the Liquid Crystal Display (LCD), the external monitor, or both devices. See "Selecting the Display Mode" in the online document *Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook* for more information.

## *Connecting a Desktop Computer or Serial Device*

You can use the port replicator to connect your notebook computer to another computer, or to connect other peripherals, such as the Sony Digital Still Camera.

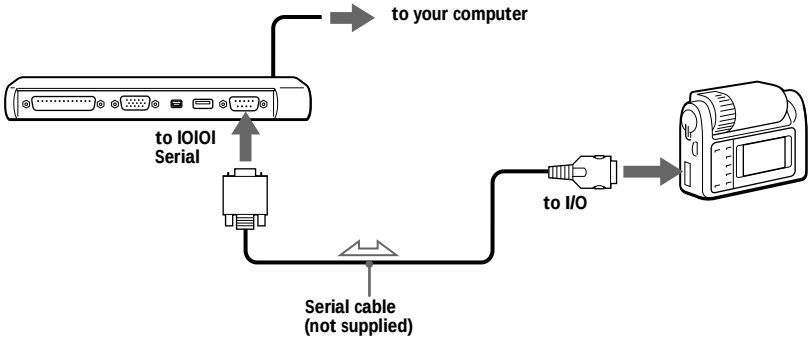
*To connect a desktop computer*

- Use the IOIOI symbol to locate the Serial connector. Plug a null-modem cable (not supplied) into this port on the port replicator and into the serial port on the desktop computer.



*To connect a digital still camera*

❑ Use the IOIOI symbol to locate the Serial connector. Plug the connecting cable into this port on the port replicator and into the Digital I/O connector on the digital still camera.




The Sony Digital Still Camera is pictured; you may need to connect your camera differently.

See the manual that came with your digital camera or other serial device for more information on installation and use.

If you use a digital camera that has an infrared data communication system or other infrared communication device, see "Using Infrared Communication Devices" on page 34.

# Connecting the CD-ROM Drive

You can use the optional PCGA-CD51 CD-ROM drive with your notebook computer.

Procedures for connecting the CD-ROM drive may vary, depending on the CD-ROM drive.

See the manual that came with your CD-ROM drive for more information on use.

To play an audio CD in the optional PCGA-CD51 CD-ROM drive with your notebook computer, your computer's settings must be set properly. You can check the settings as follows:

1) Click the Start button, select Settings, and click Control Panel.

2) Click the Multimedia icon.

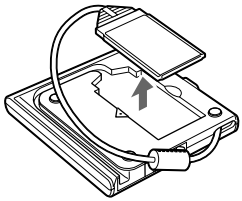
3) Click the CD tab and make sure the "Enable digital CD audio for this CD-ROM device" box is checked. When this box is checked, your notebook computer's settings are correct for playing an audio CD in the PCGA-CD51 CD-ROM drive.

*To connect the CD-ROM drive*

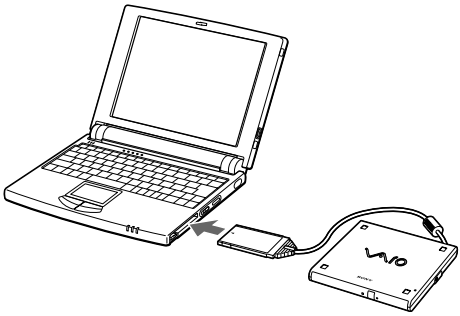
You can connect a PCGA-CD51 CD-ROM drive while the computer is on, unless you want to use the System and Application Recovery CDs. Turn off your computer before using the System and Application Recovery CDs.

1 Remove the PC card slot protector from the PC card slot. See "Using PC Cards" on page 30 for details.

2 Remove the PC card from the bottom side of the CD-ROM drive.



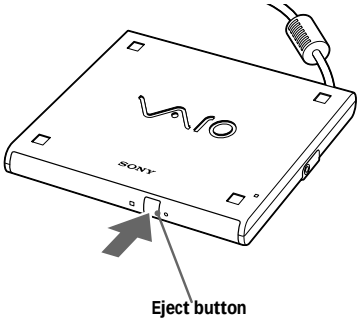
3 Insert the PC card into the PC card slot with the SONY logo facing up. See “Using PC Cards” on page 30 for details.



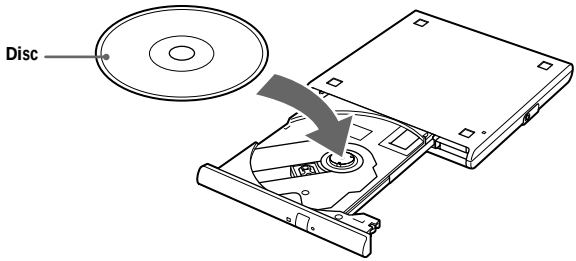
A protective cover is attached to the lens of the CD-ROM drive at the factory. Before using the CD-ROM drive, remove the protective cover.

*To insert a CD-ROM disc*

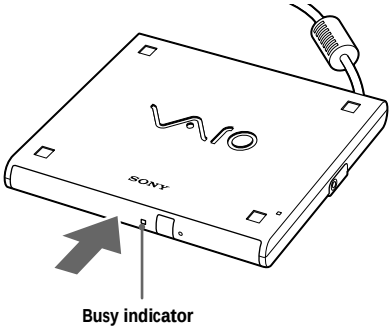
1 Press the Eject button. The disc tray slides out.




2 Place the CD-ROM disc in the tray with the label side facing up. Push the disc onto the hub until the disc clicks into place.



3 Close the tray by pushing it gently. The BUSY indicator on the CD-ROM drive flashes while your computer is reading data from the disc.




*To remove the CD-ROM drive*

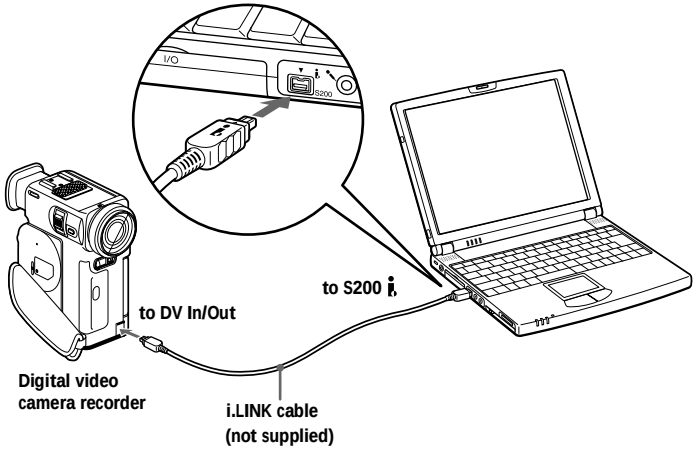
❑ Remove the PC card from the computer. See “Using PC Cards” on page 30 for details.

# Connecting an i.LINK™ device

Your VAIO Z505 SuperSlim Pro notebook includes an i.LINK (IEEE-1394) connector, which you can use to connect to an i.LINK device such as a digital video camera recorder.

*To connect a digital video camera recorder*

❑ Plug one end of an i.LINK cable into the S200 connector on the left side of the computer and the other end into the DV In / Out connector on the digital video camera recorder.




✍ The Sony digital video camera recorder (DCR-PC7) is pictured; your digital video camera recorder may need to be connected differently.

On Sony digital video cameras, connectors labeled "DV In/Out" or "i.LINK" are i.LINK-compatible.

See the manual that came with your digital video camera recorder for more information on installation and use.

The i.LINK connector does not supply power to external devices. If the external device requires power from the i.LINK connector, you cannot use the device with your computer.

The VAIO Z505 SuperSlim Pro notebook supports transfer rates up to 200 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.

The i.LINK features available may vary depending on the software applications you use. See the documentation that came with your software for more information.

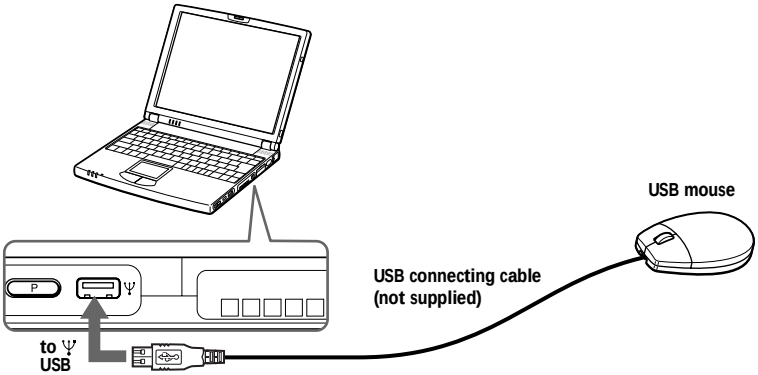
See page 33 for a list of i.LINK cables compatible with your VAIO Z505 SuperSlim Pro notebook.

# Connecting a Universal Serial Bus (USB) Device

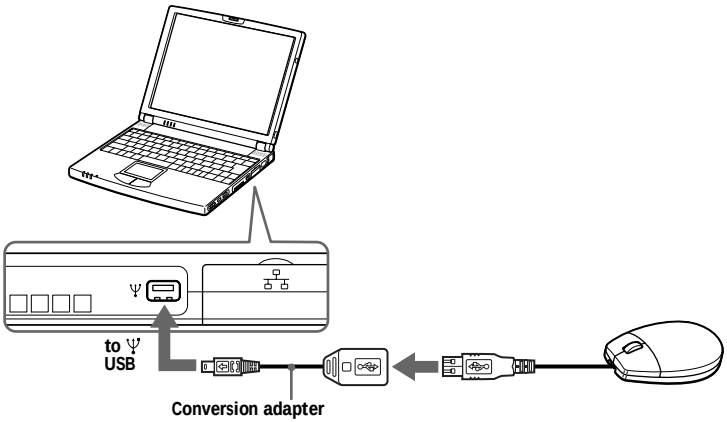
You can connect a USB device, such as a USB mouse, to your computer.

*To connect a USB device*

Use the Ψ symbol to locate the USB connector on the right side of the computer. Plug one end of the USB cable into this port and the other end into the USB mouse.




When you wish to use another USB device, such as a floppy disk drive, at the same time, connect the second USB device to the Ψ (mini USB) connector by attaching the supplied conversion adapter.



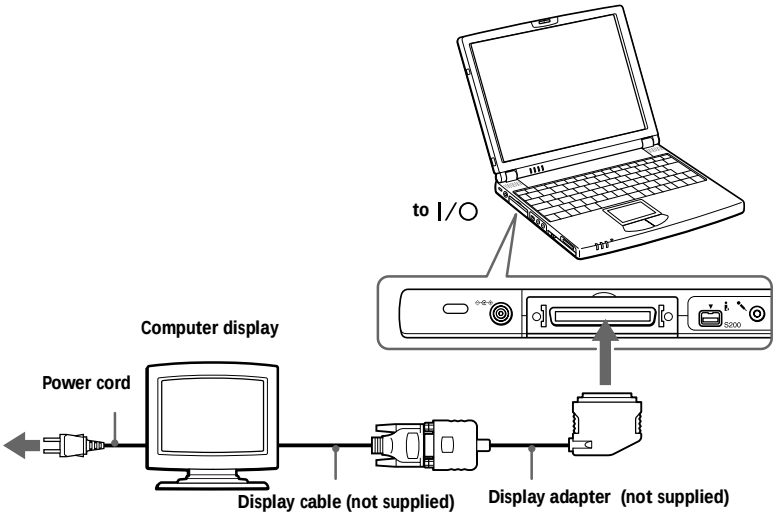

See the manual that came with your USB device for more information on installation and use.

# Connecting an External Display

You can connect an external display to your notebook computer. For example, you can use the computer with a computer display (monitor) or projector.

*To connect a computer display*

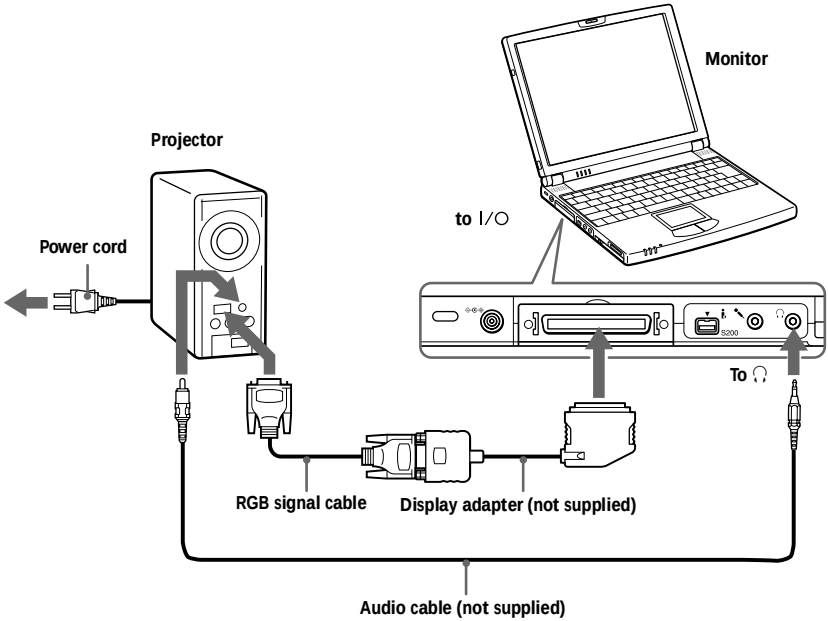
Use the I/O port replicator connector on the left side of the computer. Plug the display adapter (not supplied) into this connector. If necessary, plug one end of the display's power cord into the display, and the other end into an AC outlet.




See the manual that came with your computer display for more information on installation and use.

*To connect a projector*

You can use a projector, such as the Sony LCD Projector, as an external display.




See the manual that came with your projector for more information on installation and use.

*To remove the display adapter*

Press both sides of the display adapter connector and unplug it from the computer.

*To select a display*

When you connect an external display to your computer, you can press Fn+F7 to toggle the output between the Liquid Crystal Display (LCD), the external monitor, or both devices.

See "Selecting the Display Mode" in the online document Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook for more information.

## Adding Memory

In the future you may want to install memory modules to expand the functionality of your computer. You can increase memory to 192 MB by installing an optional memory module. The PCG-Z505S has 64 MB on-board memory; the PCG-Z505SX has 64 MB on-board memory and a 64 MB memory module for a total of 128 MB.

You can add an expansion memory module in a slot. If you have purchased the PCG-Z505S, you can add a 64 MB or 128 MB memory module. If you have purchased the PCG-Z505SX, you can add a 128 MB memory module; this requires removing the supplied 64 MB memory module.*

! **Make sure you observe the proper safety precautions when you install a memory module in your computer. See the bulleted list below. Be careful when adding memory. Mistakes when installing or removing a memory module may cause a malfunction.**

- The procedures described below assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.
- Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described below. Failure to do so may result in personal injury or equipment damage.
- Electrostatic discharge (ESD) can damage disk drives and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
- Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- Use the special bag for preventing ESD or use aluminum foil when you store the memory module.

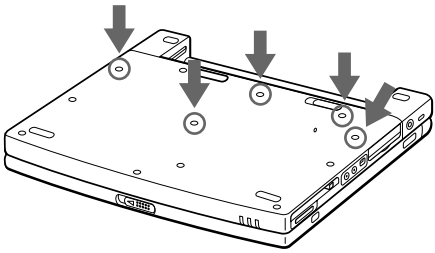
* When you expand the PCG-Z505SX memory to 192 MB, the supplied 64 MB memory module can no longer be used in the PCG-Z505SX.

### *To install a memory module*

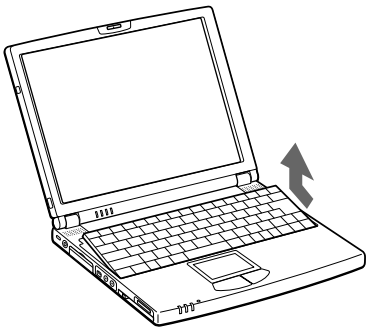
1 Shut down your computer and disconnect all peripheral devices, such as your printer.

2 Unplug the computer and remove the battery packs.

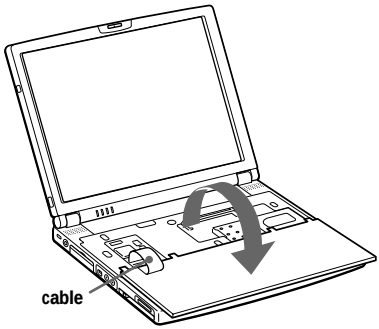
3 Wait until the computer cools down. Then unscrew the five screws with the ● mark on the bottom of your computer.



4 Slide the LCD lock lever and lift the cover. Slide the keyboard toward the LCD display, then lift it away slightly.



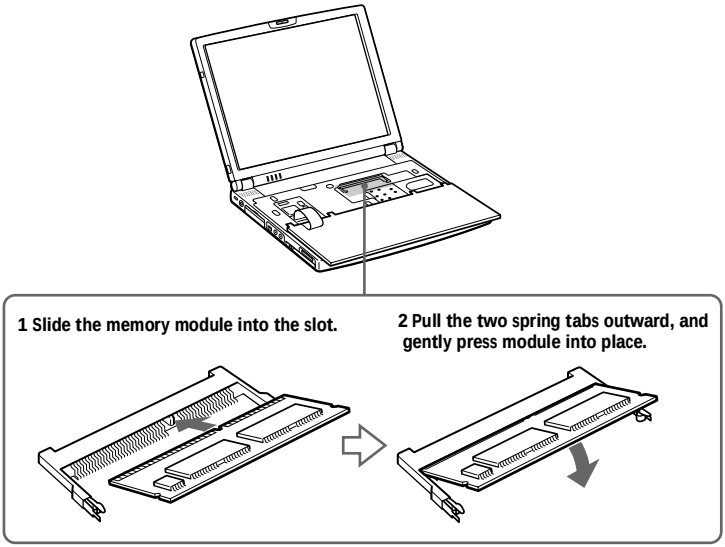
5 Lift the keyboard from the LCD display side, then gently turn it over on the space where the touchpad is. Be careful not to detach the cable when lifting the keyboard.



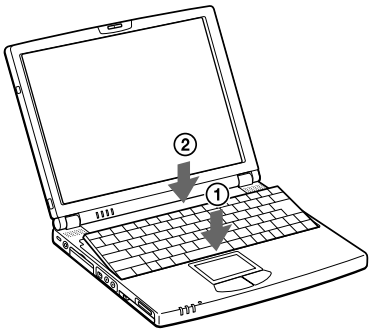

6 If you are adding memory to the PCG-Z505SX, you must remove the existing memory module. Follow the instructions in “To remove a memory module” on page 59.

7 Remove the memory module from its packaging.

8 Install the memory module. Be careful not to touch the other components of the motherboard.




9 Gently replace the keyboard, then press it into your computer. Be careful not to detach the cable when lifting the keyboard.




10 Close the computer cover, then tighten the screws on the bottom of the computer.

11 Turn on the computer.

12 Click the Start button, point to VAIO, and click Sony Notebook Setup. The Sony Notebook Setup screen appears.

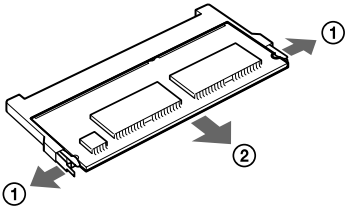
13 Click the About This Computer tab to view the amount of system memory. If the additional memory is not shown, repeat steps 1-12.

### *To remove a memory module*

1 Follow steps 1 to 5 of "To install a memory module."

2 Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.

3 Remove the memory module.




**1 Pull the tabs in the direction of the arrows. The memory module is released.**

**2 Pull the memory module in the direction of the arrow.**

4 Follow steps 8 and 9 of "To install a memory module."

# Getting Help

Sony provides several support options for your Sony computer. When you have questions about your computer and the preinstalled software, check these sources for answers, in the following sequence:

| | | |
|---|---|---|
| 1 | *VAIO® Z505 SuperSlim Pro™ Notebook Read Me First* | Contains a complete list of the items that ship with your computer, product specifications, software support information, and the most up-to-date information on using your computer. |
| 2 | *VAIO® Z505 SuperSlim Pro™ Notebook User Guide* | Explains how to use your VAIO Z505 SuperSlim Pro notebook and connect peripheral devices. |
| 3 | *Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook* | This electronic document contains additional information on customizing your notebook computer. You can access this guide from the Windows Start menu by selecting Programs / VAIO / Documentation. |
| 4 | Manuals and online help files that may accompany your preinstalled software | Most of the manuals for preinstalled software are located on your hard disk drive as online help files. You can access the online help files from the Help menu in the specific application. A printed manual is available for some applications. |
| 5 | Knowledge Database | Provides instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access the Sony Knowledge Database at: http: / / www.sony.com / pcsupport |

| | | |
|---|---|---|
| 6 | Sony Fax-on-Demand | This service provides you with answers to commonly asked questions. You can use this automated service to request a list of available topics and then select the topics that you want to receive. To contact the Sony fax-on-demand service, call 1-888-4SONYPC (1-888-476-6972). (Requires a fax machine or your fax software.) |
| 7 | Calling Sony Customer Support | You can call and speak with a Sony Customer Support Representative without using your computer by calling 1-888-4SONYPC (1-888-476-6972). Software support is available free of charge for 90 days after the original date of purchase. |

# Troubleshooting

This section describes how to solve common problems you may encounter when using your computer. Many problems have simple solutions, so try these suggestions before you call Sony Customer Support.

When you reconnect devices, be sure to turn off the computer as described in "Shutting Down Your Computer" on page 14. Turning off the computer using other methods may result in data loss.

*My computer does not start*

- Check that the computer is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the computer indicates that the power is on.
- Check that the battery is inserted properly and that it is charged.
- Make sure there is no diskette in the floppy disk drive.
- Confirm that the AC adapter and all cables are connected firmly, as described in "Connecting Peripheral Devices" on page 39.
- If you plugged the computer into a power strip or UPS, make sure the power strip or UPS is turned on and working.
- If you are using an external display, check that it is plugged into a power source and turned on. Check that the brightness control is adjusted correctly. See the manual that came with your display for details.
- Moisture condensation may have occurred. Do not use the computer for at least one hour and then turn on the computer.

*When I turn on my computer, the message "Operating system not found" appears and Windows does not start*

- Check the floppy disk drive to see if a non-bootable diskette is in the drive.
- If a non-bootable diskette is in the drive, turn off the computer, remove the diskette, and then turn on the computer again. Confirm that Windows starts properly. If Windows still does not start, follow the procedure below to initialize the BIOS.

- If the floppy disk drive is empty or contains a bootable diskette, use the following procedure to initialize the BIOS:

  1 Remove the floppy disk drive, port replicator, PC card, and any other peripheral devices from the computer.

  2 Turn the computer off and then turn it on again.

  3 Turn on the computer and press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.

  4 Press the arrow keys to select the Exit menu.

  5 Press the arrow keys to select Get Default Values and then press the Enter key. The message "Load default configuration now?" appears.

  6 Check that Yes is selected, then press the Enter key.

  7 Press the arrow keys to select Exit (Save Changes) and then press the Enter key. The message "Save configuration changes and exit now?" appears.

  8 Check that Yes is selected, then press the Enter key. The computer restarts.

*When I turn on my computer, the message "C:\WINDOWS" appears and Windows does not start*

- Enter "win", then press the Enter key. When the message "MS-DOS is activated. Do you want to return to Windows and restart applications?" appears, press the Enter key again. Windows starts.
- When shutting down your computer, follow the procedure in "Shutting Down Your Computer" on page 14. Windows should start automatically the next time you turn on your computer.

*My LCD does not display anything*

- Check that the computer is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the computer is on.
- Check that the battery pack is inserted properly and that it is charged.
- The computer may be in LCD (Video) Standby mode. Press any key to activate the display.
- The video output may be directed to an external display attached to the port replicator. Press Fn+F7 until video output appears on the LCD.

*The screen image on my external display is not centered or sized properly*

Use the controls on your external display to adjust the image. See the manual supplied with your display for more information.

*My computer "locks up"*

- Try restarting the computer. On the Windows taskbar, click the Start button, click Shut Down, and then click Restart the computer.
- If you cannot restart as described in the preceding step, you can restart the computer by pressing Ctrl+Alt+Delete.
- If the previous step does not work, slide the power switch toward the front and hold it for four seconds. This turns off the power.
- If your computer locks up while playing a CD-ROM, stop the CD-ROM, and restart the computer by pressing Ctrl+Alt+Delete.

✍ Pressing Ctrl+Alt+Delete or turning off the computer with the power switch may result in data loss in files that are currently open.

*My software program "locks up" or crashes*

Contact the software publisher or designated provider for technical support.

*I cannot print*

Try changing the printer port mode. In Sony Notebook Setup, select the Printer / FDD tab. If the printer port mode is set to ECP, change it to bi-directional. If the printer port mode is set to bi-directional, change it to ECP. See "Displaying the Sony Notebook Setup Screen" in the online document *Customizing Your VAIO® Z505 SuperSlim Pro™ Notebook* for details on using Sony Notebook Setup.

*Movements of the displayed images are awkward (not smooth)*

In PowerPanel, select Change CPU Speed. Remove the check from Auto, and set Speed Control to 100%.

*I cannot play a CD-ROM*

- Make sure the label of the CD-ROM is facing up.
- If the CD-ROM requires software, make sure the software is installed according to the program's instructions.
- Moisture condensation may have occurred. Disconnect the CD-ROM drive and disconnect the power to the drive for at least one hour.
- Make sure the CD-ROM drive is properly connected. See "Connecting the CD-ROM Drive" on page 48.

- Clean the CD-ROM.
- Check the speaker volume.

*When I click an application icon a message appears, such as "You must insert the application CD into your CD-ROM drive," and the software does not start*

- Some titles require specific files that are located on the application's CD-ROM. Insert the disc and try starting the program again.
- Make sure you place the disc in the tray with the label side facing up.

*My floppy disk drive cannot write to a diskette*

- The diskette is write-protected. Disable the write-protect feature or use a diskette that is not write-protected.
- Check that the diskette is properly inserted into the floppy disk drive.

*My speaker has no sound*

- The built-in speaker is turned off. Press Fn+F3 to turn on the speaker.
- The speaker volume is turned to the minimum. Press Fn+F4, and then press ↑ or → to increase the volume.
- If your computer is powered by the battery, check that the battery is connected properly and that it is charged.
- If you are using an application that has its own volume control, check that the volume is turned up.
- Check the volume controls in Windows 98.
- If you have connected a headphone or an audio cable to the Headphone connector, disconnect the cable.

*When I press Fn+F3, I see the message "Sound Disabled"*

Use the following procedure to enable sound:

1. Click Start, select Settings, and click Control Panel.
2. Click the System icon.
3. Click the Device Manager tab.
4. Click Sound, video & game controllers.
5. Double-click NeoMagic Magic PageMedia 256AV+AC97 Driver (WDM).
6. Uncheck the "Disable this hardware profile" box.
7. Click Okay. Sound is now enabled.

*My modem does not work*

- ❑ Check that the phone line is plugged into the line jack. See "Connecting a Phone Line" on page 40 for details.
- ❑ Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.
- ❑ Check that the phone number the program is dialing is correct.
- ❑ Check that the software you are using is compatible with the notebook computer modem. (All preinstalled programs are compatible.) Call the software publisher or Sony Customer Support.

*My modem connection is slow*

The computer's modem uses K56flex™ technology / V.90. Many factors influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider, check the following:

- ❑ Have your phone company check that your phone line is free from any line noise.
- ❑ If your problem is fax-related, check that there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- ❑ If you are having a problem connecting with your Internet Service Provider, check that the ISP is not experiencing technical problems.
- ❑ If you have a second phone line available, try connecting the modem to that line.

*My mouse does not work*

If you have connected an external mouse to the mini USB connector, it may cause some problems when you transfer high-speed or high-capacity data. Use the USB connector.

*I cannot use DV devices and messages appear on the screen*

- ❑ Check that the DV device is turned on and that the cables are properly connected.
- ❑ If you are using multiple i.LINK devices, the combination of the connected devices may cause unstable operation. In this case, turn off the power to all connected devices and disconnect unused devices. Check the connection, then turn on the power again.

*My computer does not shut down*

It is best to shut down your computer using the Shut Down command on the Windows 98 Start menu. Using other methods, including those listed here, may result in loss of unsaved data. If the Shut Down command does not work properly, follow these steps:

- Restart the computer by pressing Ctrl+Alt+Delete. If this does not work, slide the power switch forward and hold it for four seconds.
- Unplug the computer from the AC adapter and remove the battery pack from your computer.

*My PC card is not working*

- Make sure the PC card is compatible with Windows 98.
- Use the Sony Notebook Setup utility to disable devices you are not currently using.

*When I remove the Memory Stick card, an error message appears.*

Insert the card into the slot again and press the Enter key. Wait until the active application finishes, then remove the card. If the message confirms eject of the card, click OK.

# Using the System and Application Recovery CDs

The following sections describe how to use the System Recovery and Application Recovery utilities. You need to connect the optional PCGA-CD5 or PCGA-CD51 CD-ROM drive to use the System and Application Recovery CDs.

## Using the System Recovery CD(s)

You can reinstall software titles that shipped with your computer if they are corrupted or accidentally erased. You may not need to recover the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CDs to reinstall individual applications or device drivers. See "Using the Application Recovery CD(s)" on page 71.

The System Recovery CD contains a backup copy of all the software originally installed on your hard disk drive. **It can be used only to recover the hard disk of the notebook computer you purchased.**

The System Recovery utility gives you three options:

- **Full Restore without Format** restores all the software titles that originally came with your computer without formatting the hard disk.
- **Full Restore with Format** formats the hard disk drive and then restores all the original software.
- **Operating System Only** restores the Windows 98 operating system, the notebook computer utility programs, and the device drivers that shipped with your computer.

! **If you choose the Full Restore with Format or Operating System Only option, your hard disk will be formatted, which removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your computer. This means you will have to reinstall any applications that were not included with the computer when you purchased it. If you choose the Full Restore without Format option, you may need to reinstall applications that were not included with the computer when you purchased it. If you have any questions on using the System Recovery CD, contact Sony Customer Support.**

*To use the System Recovery CD(s)*

The optional PCGA-CD5 or PCGA-CD51 CD-ROM drive must be connected to the computer to use the System Recovery CD.

You need to complete the Windows® 98 registration process when you use the System Recovery CD. Make sure you have the product ID number located on the cover of your Microsoft Windows 98 Getting Started manual. You will need this number to complete the recovery process.

1. Insert the Sony System Recovery CD in the CD-ROM drive.
2. Shut down your computer as described in "Shutting Down Your Computer" on page 14.
3. Wait four seconds and turn on your computer.
4. Click OK to signify you have read and accept the Microsoft End-User License Agreement.
5. When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two System Recovery CDs. If you have two System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes 30 to 60 minutes to complete.

*If your computer does not start from the Recovery CD*

1. Slide the power switch forward and hold it for more than four seconds to turn off the computer.
2. Turn on the computer and press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.
3. Press the arrow keys to select the Exit menu.
4. Press the arrow keys to select Get Default Values and then press the Enter key. The message "Load default configuration now?" appears.
5. Check that Yes is selected, then press the Enter key.
6. Press the arrow keys to select Exit (Save Changes) and then press the Enter key. The message "Save configuration changes and exit now?" appears.

7 Check that Yes is selected, then press the Enter key. The computer restarts from the Recovery CD.

### *Using the Application Recovery CD(s)*

The Application Recovery CDs allow you to reinstall individual applications and device drivers if they are corrupted or accidentally erased. Reinstalling an individual device driver or software title may correct a problem you are experiencing with your computer, and you may not need to recover the entire contents of your hard drive. If you do need to reinstall all the software titles that shipped with your computer, use the System Recovery CD. See "Using the System Recovery CD(s)" on page 69.

You must be in Windows to run the Application Recovery CDs. The application will not run from DOS. If you have any questions on using the Application Recovery CDs, contact Sony Customer Support.

Some applications on the Application Recovery CDs must be decompressed before the installation process begins. Your screen does not change while the files are decompressed. The time to decompress an application varies and may be as long as 30 minutes.

*To use the Application Recovery CD(s)*

1 Turn on your computer. If your computer is already on, close all applications.

2 When the Windows desktop appears, insert the first Sony Application Recovery CD in the CD-ROM drive. The Application Recovery utility loads automatically.

3 When the Application Recovery menu appears, follow the on-screen instructions to complete the recovery process.

Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

# Notes on Use

This section describes safety guidelines and precautions to help protect your computer from potential damage.

*On Handling the LCD Screen*

- ❑ Do not leave the LCD facing the sun as it can damage the LCD. Be careful when using the computer near a window.
- ❑ Do not scratch the LCD or exert pressure on it. This could cause malfunction.
- ❑ Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- ❑ A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The residual image disappears in a while. You can use a screen saver to prevent residual images.
- ❑ The screen becomes warm during operation. This is normal and does not indicate a malfunction.
- ❑ The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

*On the Power Source*

- ❑ Your computer operates on 100V-240V AC 50/60 Hz.
- ❑ Do not share the AC outlet with other power-consuming equipment, such as a copying machine or shredder.
- ❑ You can purchase a power strip with a surge protector. This device prevents damage to your computer caused by sudden power surges such as those that may occur during an electrical storm.
- ❑ Do not place heavy objects on the AC adapter or its cord.

- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Unplug your computer from the wall outlet if you will not be using the computer for a long time.
- When the AC adapter is not used, unplug it from the AC outlet.
- Use only the AC adapter supplied. Do not use any other AC adapter.

*On Handling*

- Clean the cabinet with a soft, dry cloth or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer.
- Should any solid object or liquid fall into the computer, shut down your computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it any further.
- Do not drop the computer or place heavy objects on top of the computer.

*On Installation*

- Do not place your computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95º F (35º C) or less than 50º F (10º C)
  - High humidity
- Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
- Provide adequate air circulation to prevent internal heat build-up. Do not place your computer on porous surfaces such as rugs or blankets, or near materials such as curtains or draperies that may block its ventilation slots. Leave a space of at least 8 inches behind the back panel of the computer.

- The computer uses high-frequency radio signals and may cause interference to radio or TV reception. Should this occur, relocate the computer a suitable distance away from the set.
- Use only specified peripheral equipment and interface cables; otherwise, problems may result.
- Do not use cut or damaged connection cables.
- Your computer will not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX).
- If the telephone company makes a service call to your home or office and determines that your computer is responsible for a problem, the telephone company may bill you for the service call. Also, if you do not disconnect your computer when it is adversely affecting the telephone line, the telephone company has the right to disconnect your service until you correct the problem.

*On Moisture Condensation*

If the computer is brought directly from a cold location to a warm one, moisture may condense inside your computer. In this case, allow at least an hour before turning on your computer. If any problems occur, unplug your computer, and contact your Sony Service Center.

*On Handling Diskettes*

- Do not open the shutter manually and touch the surface of the diskette.
- Keep diskettes away from magnets.
- Keep diskettes away from direct sunlight and other heat sources.

*On Handling CD-ROM Discs*

- Do not touch the surface of the disc.
- Do not drop or bend the disc.

*On Cleaning CD-ROM Discs*

- Fingerprints and dust on the surface of a disc may cause read errors. Proper care of the disc is essential to maintain its reliability. Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray, as they may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.

*On Using Batteries*

- Never leave the battery pack in temperatures above 140° F (60° C), such as under direct sunlight or in a car parked in the sun.
- Battery life is shorter in a cold environment. This is due to decreased battery efficiency at low temperatures.
- Charge the batteries at temperatures between 50° F and 80° F (10° C to 30° C). Lower temperatures require a longer charging time.
- While the battery is in use or being discharged, the battery pack heats up. This is normal and is not cause for concern.
- Keep the battery pack away from all sources of heat.
- Keep the battery pack dry.
- Do not open or try to disassemble the battery pack.
- Do not expose the battery pack to any mechanical shock.
- If you are not using the computer for an extended period of time, remove the battery pack from the computer to prevent damage to the battery.
- If, after fully charging the battery pack, the battery power is still low, the battery pack may be reaching the end of its life and should be replaced.
- You do not need to discharge the battery before recharging.
- If you have not used the battery pack for a considerable amount of time, recharge the battery.

*On Handling Memory Stick Media*

- Do not touch the connector with your finger or metallic objects.
- Use only the label supplied with the card as a label.
- Do not bend, drop, or apply strong shock to card.
- Do not disassemble or modify cards.
- Do not let cards get wet.
- Do not use or store cards in a location subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or near corrosive substances
- Use the storage case supplied with the card.

*On Maintenance*

- Make sure to disconnect the AC adapter before cleaning the computer.
- Avoid rubbing the LCD screen as this can damage the screen. Use a soft, dry cloth to wipe the LCD screen.
- Clean the computer with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzine.

# Limited Warranty Statement

## *VAIO Z505 SuperSlim Pro Notebook Computer Warranty*

The limited warranty on your Sony VAIO Z505 SuperSlim Pro notebook covers parts and labor against defects in material or workmanship for a period of three months from the original date of purchase. You can extend the warranty period for an additional nine months by registering your computer. See “Registering Your Computer” on page 16. Once you register your computer, the limited warranty period is twelve months from the original date of purchase.

There is a separate warranty for the battery included with your computer. See “Battery Limited Warranty” on page 83.

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For the purpose of this Limited Warranty “SONY” means SONY ELECTRONICS INC. for Products purchased in the United States of America and Sony of Canada Ltd. for Products purchased in Canada. SONY warrants this computer hardware product (“the Product”) against defects in material or workmanship as follows:

1. Labor: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will repair defects in material or workmanship in the Product at no charge, or pay the associated labor charges to a SONY authorized personal computer service facility. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically prior to the expiry of ninety (90) days from the original date of purchase. After the applicable period you must pay for all labor charges.

2. Parts: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will supply, at no charge, new or rebuilt, at SONY’s option, replacement parts in exchange for defective parts. Any replacement parts will be warranted for the remainder of the original warranty period or ninety (90) calendar days from installation by SONY’s authorized personal computer service facility, whichever is longer. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically prior to the expiry of ninety (90) days from the original date of purchase. All defective parts replaced under this Limited Warranty will become the property of SONY.

This Limited Warranty covers only the hardware components packaged with the Product. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the Product; SONY excludes all warranties express or implied in respect of any software provided with the product and any such software is provided “AS IS” unless expressly provided for in any enclosed software limited warranty. Please refer to the End User License Agreements included with the Product for your rights and obligations with respect to the software.

This Limited Warranty is non-transferable. Proof of purchase in the form of a bill of sale (which is evidence that the Product is within the warranty period) must be presented to obtain warranty service. In addition, if replacement parts are required and you wish to receive the most expedient service available, you will be required to provide SONY with a credit card authorization to bill your credit card in the event you fail to return the original parts in the postage-paid envelope we provide. The credit card will only be charged for SONY's list price for the part if the original part has not been returned within thirty (30) days.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated below for further information.

With respect to all service provided, it is your responsibility prior to Product service to backup the contents of your hard drive, including any data you have stored or software you have installed on the hard drive. It is likely that the contents of your hard drive will be lost or reformatted in the course of service and SONY will not be responsible for any damage to or loss of any programs, data or other information stored on any media or any part of any Product serviced hereunder or any consequential damages resulting therefrom.

IF DURING THE REPAIR OF THE PRODUCT THE CONTENTS OF THE HARD DRIVE ARE ALTERED, DELETED, OR IN ANY WAY MODIFIED, SONY IS NOT RESPONSIBLE WHATSOEVER. YOUR PRODUCT WILL BE RETURNED TO YOU CONFIGURED AS ORIGINALLY PURCHASED (SUBJECT TO AVAILABILITY OF SOFTWARE).

Be sure to remove all third party hardware, software, features, parts, options, alterations, and attachments not warranted by SONY prior to sending the Product to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America and Canada. This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR OTHER DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state, or province to province.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, online knowledge base, frequently asked questions, and free updates via the Internet: http://www.sony.com/pcsupport/

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC (1-888-476-6972).

Save this for future reference.

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## *GARANTIE RESTREINTE*

SONY DU CANADA LTÉE (“SONY”) garantit comme suit ce Produit d’ordinateur (“le Produit”) contre tous vices de matières premières et de fabrication :

1. Main-d’oeuvre : Pendant une période de quatre-vingt-dix (90) jours à compter de la date d’achat originale chez SONY ou chez un de ses revendeurs autorisés, SONY réparera le Produit à ses frais ou en remboursera les frais de main-d’oeuvre au centre de réparation d’ordinateur personnel autorisé SONY. La période de garantie de quatre-vingt-dix (90) jours peut être prolongée au bénéfice de l’acheteur original pour une période additionnelle de neuf (9) mois, soit un total de douze (12) mois à compter de la date d’achat, lorsque le Produit est enregistré électroniquement. Après la période applicable, l’acheteur doit payer tous les frais de main-d’oeuvre.

2. Pièces : Pendant une période de quatre-vingt-dix (90) jours à compter de la date d’achat originale chez SONY ou chez un de ses revendeurs autorisés, SONY fournira à ses frais des pièces de rechange neuves ou reconstruites, à sa discrétion, en échange des pièces défectueuses. Ces pièces de remplacement seront garanties pour le reste de la période originale de garantie ou pour quatre-vingt-dix (90) jours à compter de leur installation par un centre de service d’ordinateur personnel autorisé SONY, au plus long des deux termes. La période de garantie de quatre-vingt-dix (90) jours peut être prolongée au bénéfice de l’acheteur original pour une période additionnelle de neuf (9) mois, soit un total de douze (12) mois à compter de la date d’achat, lorsque le Produit est enregistré électroniquement. Toutes les pièces défectueuses remplacées au titre de cette garantie restreinte deviennent la propriété de SONY.

Cette garantie restreinte couvre uniquement les composants physiques emballés avec le Produit. Elle n’inclut pas l’assistance technique en rapport avec l’utilisation du matériel ou du logiciel et ne couvre aucun logiciel, qu’il soit ou non fourni avec le Produit. Les logiciels sont fournis “TELS QUELS” à moins d’être expressément couverts par une autre garantie restreinte spécifique. Veuillez vous reporter aux Contrats de licence d’utilisation accompagnant le Produit quant à vos obligations en rapport avec les logiciels.

Cette garantie restreinte est incessible.

Pour vous prévaloir du service au titre de la garantie, vous devrez présenter une preuve d’achat sous forme de facture de vente attestant que le Produit est couvert par la garantie en vigueur. Par ailleurs, si des pièces doivent être remplacées et que vous désirez obtenir le service le plus rapide possible, vous devrez fournir à SONY une autorisation lui permettant d’en porter le montant à votre carte de crédit advenant que vous négligiez de retourner les pièces originales dans l’enveloppe affranchie qui vous est fournie. Seul le prix courant de SONY pour cette pièce sera porté à votre carte de crédit si la pièce ne lui est pas retournée dans un délai de trente (30) jours.

Vous pouvez avoir droit au service de garantie exprès durant la période de garantie, sous réserve de certaines restrictions. Pour tout renseignement, veuillez communiquer avec SONY de la façon indiquée ci-après.

Vous avez l’entière responsabilité de faire une copie de sauvegarde du contenu du disque dur, incluant toute donnée en mémoire ou tout logiciel que vous y avez installé. Il est fort probable que le contenu du disque dur sera reformaté ou perdu en cours de service et SONY ne pourra être tenue responsable d’aucun dommage ni de la perte des programmes, des données ou de toute autre information gardée en mémoire sur tout support d’information ou sur toute partie de tout Produit en réparation.

SI, DURANT LA RÉPARATION DU PRODUIT, LE CONTENU DU DISQUE DUR EST ALTÉRÉ, SUPPRIMÉ OU MODIFIÉ, SONY N’EN SERA AUCUNEMENT RESPONSABLE. LE PRODUIT VOUS SERA RETOURNÉ TEL QU’IL ÉTAIT CONFIGURÉ QUAND VOUS L’AVEZ ACHETÉ (SOUS RÉSERVE DE LA DISPONIBILITÉ DU LOGICIEL).

Avant d'envoyer le Produit à SONY pour le faire réparer, assurez-vous d'en retirer tous produits de tierce partie, logiciels, caractéristiques, pièces, options, altérations et accessoires non garantis par SONY car SONY n'est pas responsable de la perte ou de l'endommagement de ces articles.

Cette garantie restreinte exclut les articles consommables (comme les batteries) fournis avec le Produit ; les dommages cosmétiques ; l'endommagement ou la perte des logiciels, données et supports informatiques amovibles ; les dommages dus à 1) un cas fortuit, un accident, une mauvaise utilisation, un abus, une négligence, une utilisation commerciale ou une modification du Produit ; 2) l'utilisation ou l'entretien incorrect du Produit ; 3) le branchement à une source électrique non conforme ; ou 4) toute tentative de réparation par tout autre qu'un centre de service d'ordinateur personnel autorisé SONY. Cette garantie restreinte ne s'applique pas si la défectuosité est causée par l'utilisation du Produit en conjonction avec des accessoires, articles ou équipements périphériques ou connexes, ou si SONY détermine que le Produit lui-même ne comporte aucun défaut. Cette garantie restreinte n'est valide qu'au Canada.

Cette garantie restreinte est nulle si le numéro de série appliqué en usine a été modifié ou enlevé du Produit.

La réparation ou le remplacement du matériel ou des pièces défectueuses tel que prévu au titre de cette garantie est le seul recours de l'acheteur. SONY NE SERA AUCUNEMENT RESPONSABLE DE TOUT DOMMAGE INDIRECT OU CONSÉCUTIF POUR DÉROGATION À TOUTE GARANTIE EXPRESSE OU TACITE, RUPTURE DE CONTRAT, NÉGLIGENCE, RESPONSABILITÉ STRICTE OU TOUTE AUTRE THÉORIE JURIDIQUE EN RAPPORT AVEC CE PRODUIT. DE TELS DOMMAGES INCLUENT, ENTRE AUTRES, LE TEMPS DE L'ACHETEUR, LA PERTE DE PRODUCTIVITÉ, DE REVENUS ET DE PROFITS, ET LA PERTE DE DONNÉES OU D'UTILISATION DU PRODUIT OU DE TOUT ÉQUIPEMENT CONNEXE. SAUF DANS LA LIMITE OÙ LA LOI APPLICABLE L'INTERDIT, TOUTE GARANTIE TACITE DE VALEUR MARCHANDE OU DE CONVENANCE À UNE FIN PARTICULIÈRE DE CE PRODUIT EST RESTREINTE DANS SA DURÉE À LA DURÉE DE CETTE GARANTIE.

Certaines provinces ne permettent pas l'exclusion ou la restriction des dommages accidentels ou indirects et n'admettent pas de limites quant à la durée d'une garantie tacite, de sorte que les exclusions / restrictions exprimées ci-dessus peuvent ne pas s'appliquer. Cette garantie vous donne des droits spécifiques et vous pouvez en avoir d'autres qui varient selon la province.

Soutien technique : Bien que le soutien technique ne soit pas offert gratuitement au titre de cette garantie restreinte, SONY a prévu une ligne téléphonique à cet effet. Des frais peuvent être exigés à moins que le soutien technique gratuit et temporaire ne soit expressément indiqué par écrit comme caractéristique de votre Produit. Avant de placer l'appel, assurez-vous d'avoir les numéros de modèle et de série du Produit, la date d'achat, la liste des options qui y sont installées et une description détaillée du problème.

Vous trouverez sur l'Internet un appui direct, une base de renseignements, une foire aux questions et des mises à jour gratuites sous http://www.sony.com/pcsupport/

Pour de l'information sur les produits, de l'aide avec le service, la résolution de problèmes de service ou pour une aide technique, veuillez composer le 1-888-4SONYPC (1-888-476-6972).

À conserver pour référence future.

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## Battery Limited Warranty

The limited warranty on the battery included with your Sony VAIO Z505 SuperSlim Pro notebook computer covers defects in material or workmanship for a period of 30 days from the original date of purchase. This warranty is not extendible.

For the purposes of this Limited Warranty, "SONY" means Sony Electronics Inc. for Products purchased in the United States of America and Sony of Canada Ltd. for Products purchased in Canada. Sony warrants this Product against defects in material or workmanship for thirty (30) days from your purchase date. If this Product is determined to be defective, SONY will replace the Product at no charge to you. This Limited Warranty contains your exclusive remedy. SONY shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights which vary from state to state or province to province. For information on obtaining warranty service, please call SONY at 1-888-4SONYPC (1-888-476-6972).

## GARANTIE RESTREINTE

Au titre de cette garantie restreinte, "SONY" signifie Sony du Canada Ltée pour les produits achetés au Canada et Sony Electronics Inc. pour les produits achetés aux États-Unis. SONY garantit ce produit contre tous vices de matières premières et de fabrication pour trente (30) jours à compter de la date d'achat. Si ce produit est reconnu défectueux, SONY le remplacera à ses frais. Cette garantie restreinte est votre seul recours. SONY ne sera aucunement responsable de tout dommage indirect ou consécutif pour dérogation à toute garantie tacite ou expresse sur ce produit. Certaines provinces ne permettent pas l'exclusion ou la restriction des dommages accidentels ou indirects, de sorte que les exclusions / restrictions exprimées ci-dessus peuvent ne pas s'appliquer. Cette garantie vous donne des droits spécifiques et vous pouvez en avoir d'autres qui varient selon la province. Pour de l'information sur le service au titre de la garantie, veuillez appeler Sony au 1-888-4SONYPC (1-888-476-6972).

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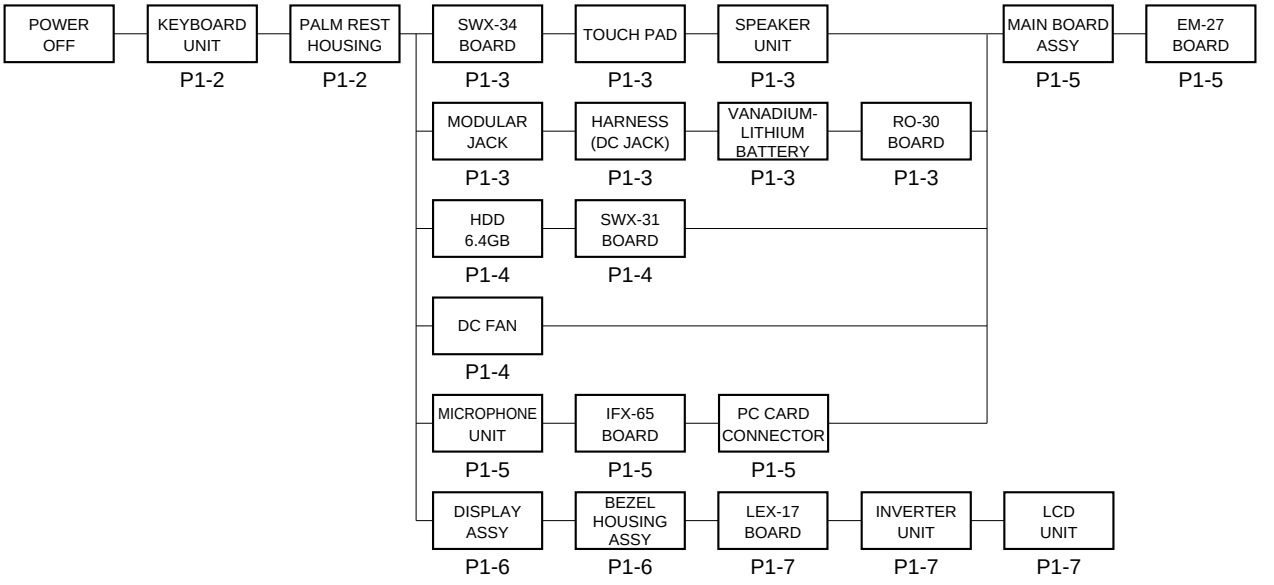
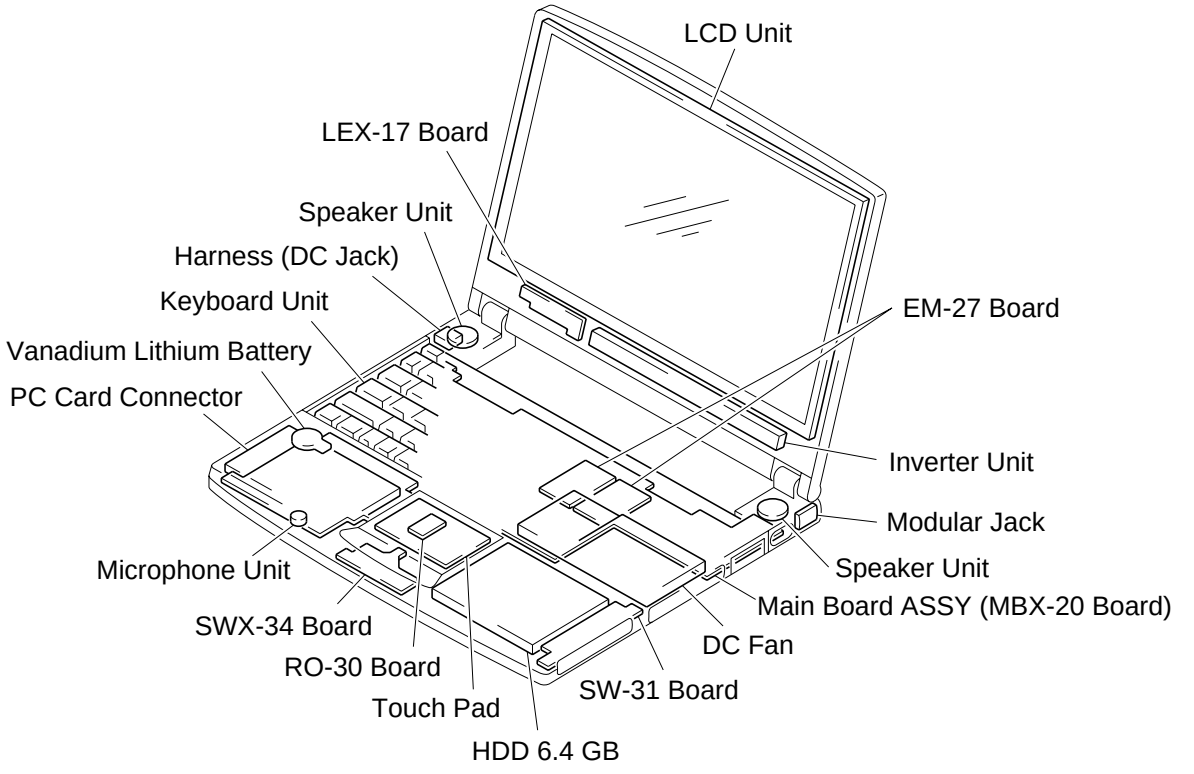
## 1-1. Flowchart




• Page x-x indicates the page for the topic.

• Note that HDDs (Hard Disc Drives) are easily damaged by shock of impact.

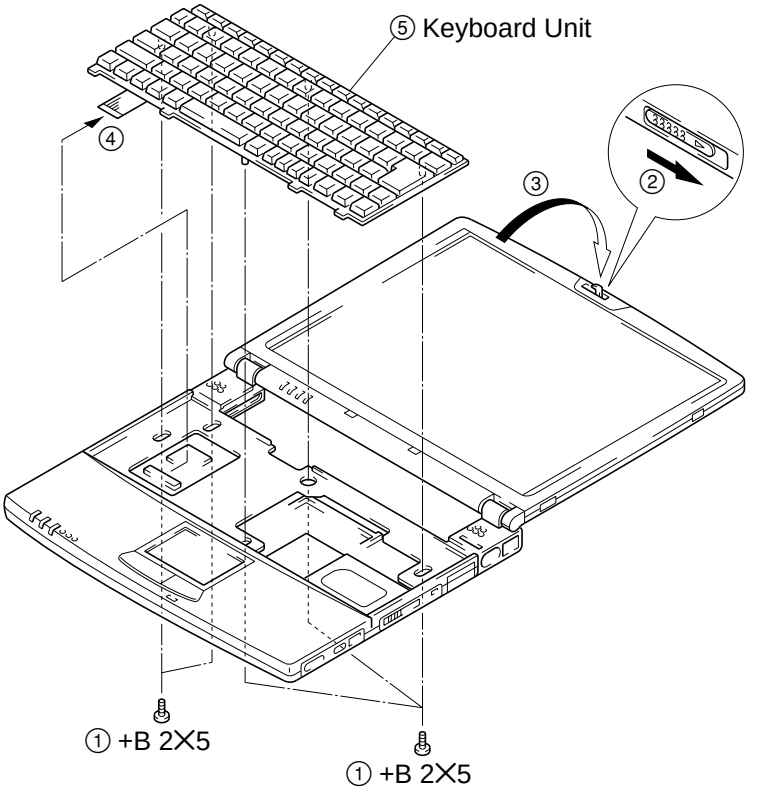
## 1-2. Electric Parts Arrangement Diagram



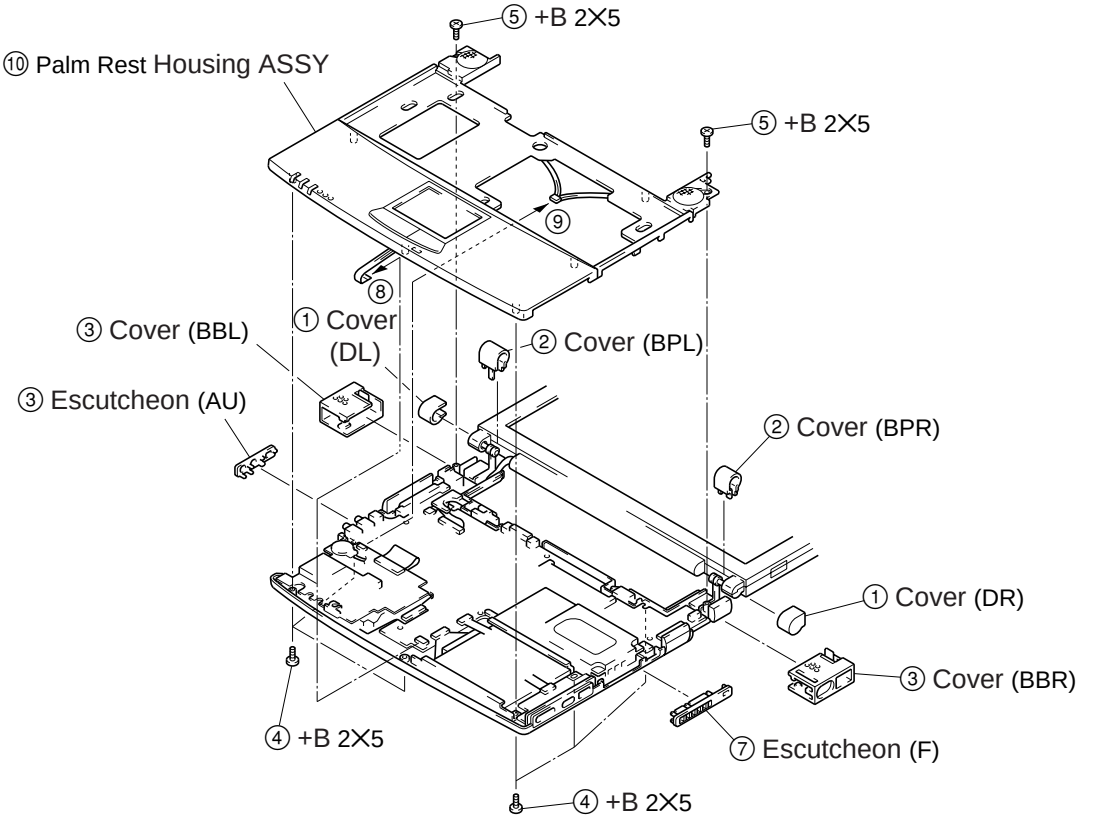

• Note that HDDs (Hard Disc Drives) are easily damaged by shock of impact.

## *1-3. Removal*

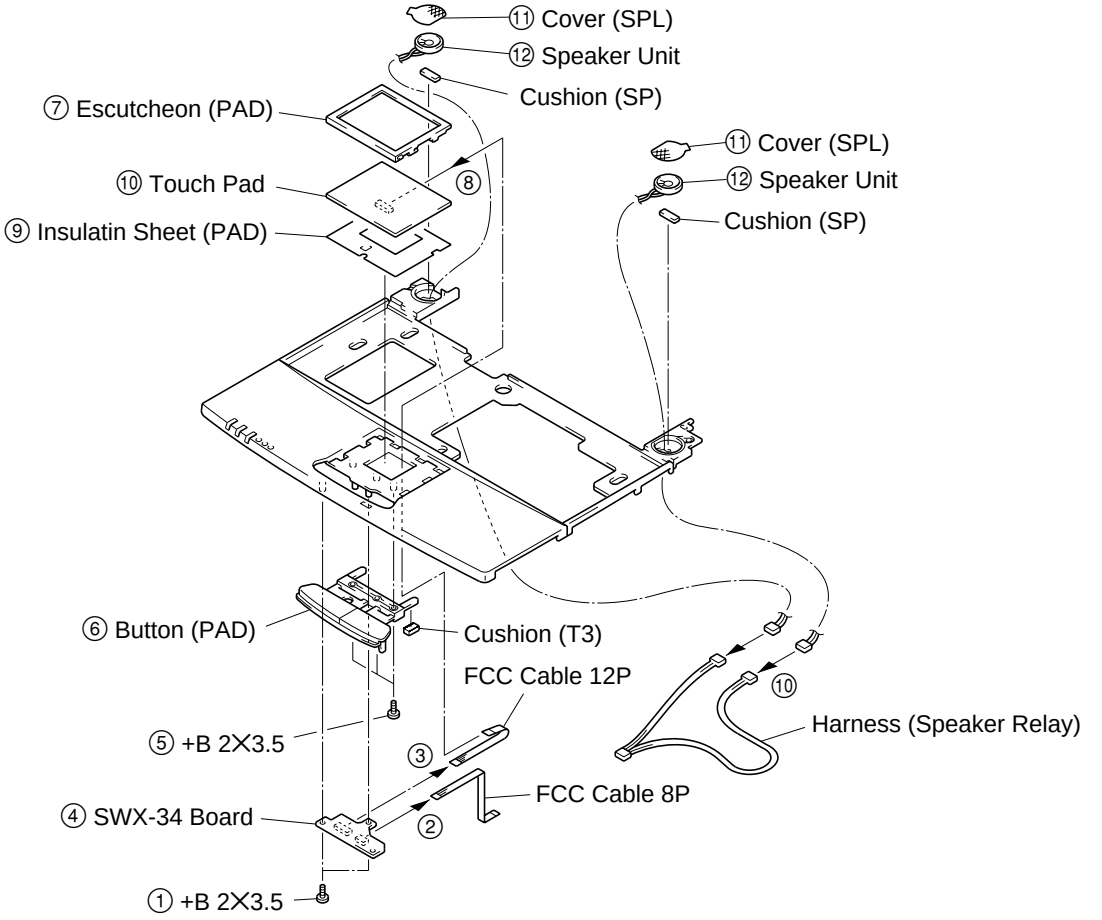
### *1. Keyboard unit*



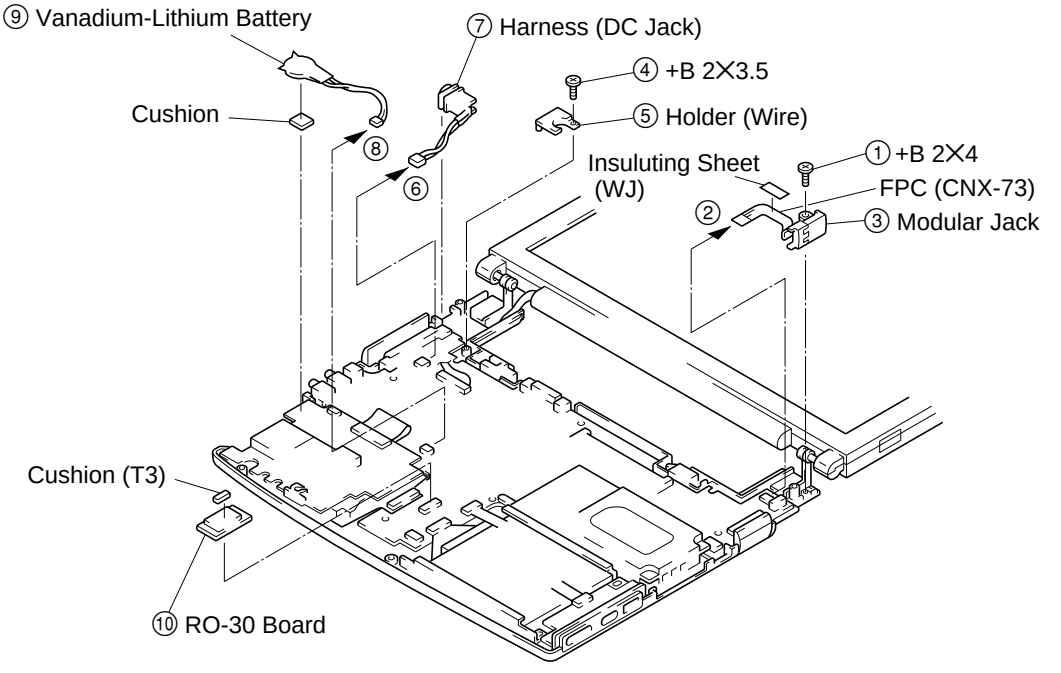

### *2. Palm rest housing assembly*



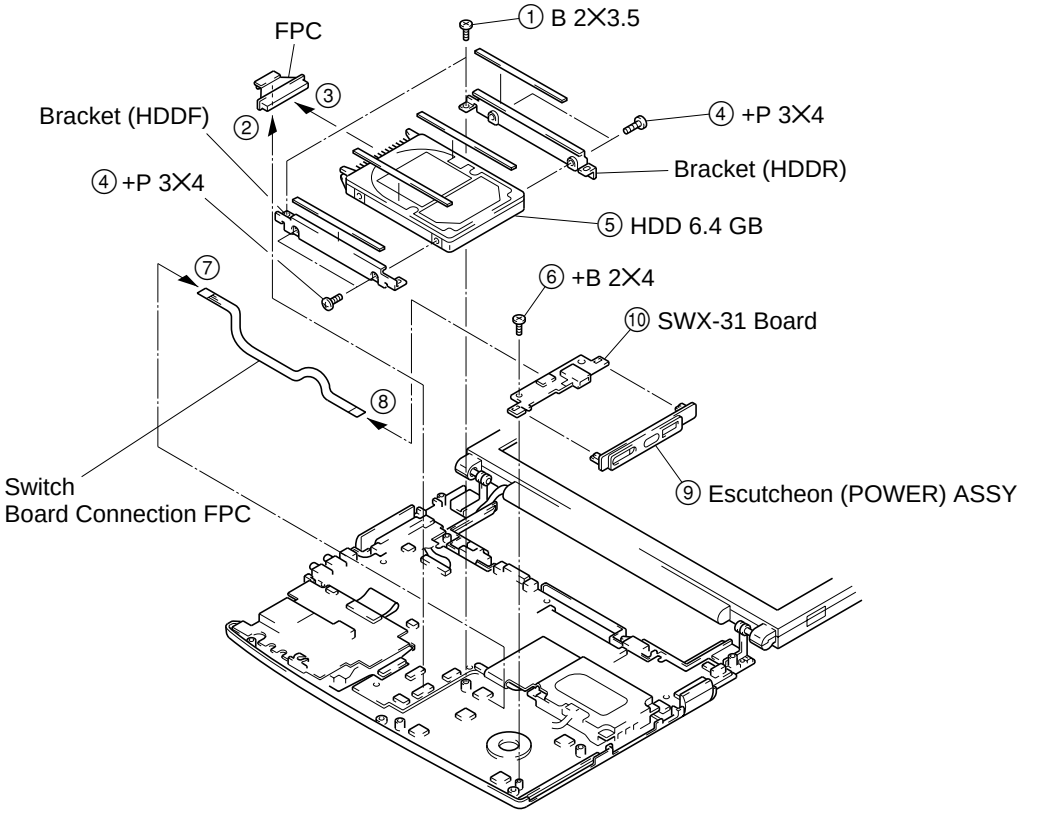
### *3. SWX-34 board, touch pad, and speaker unit*



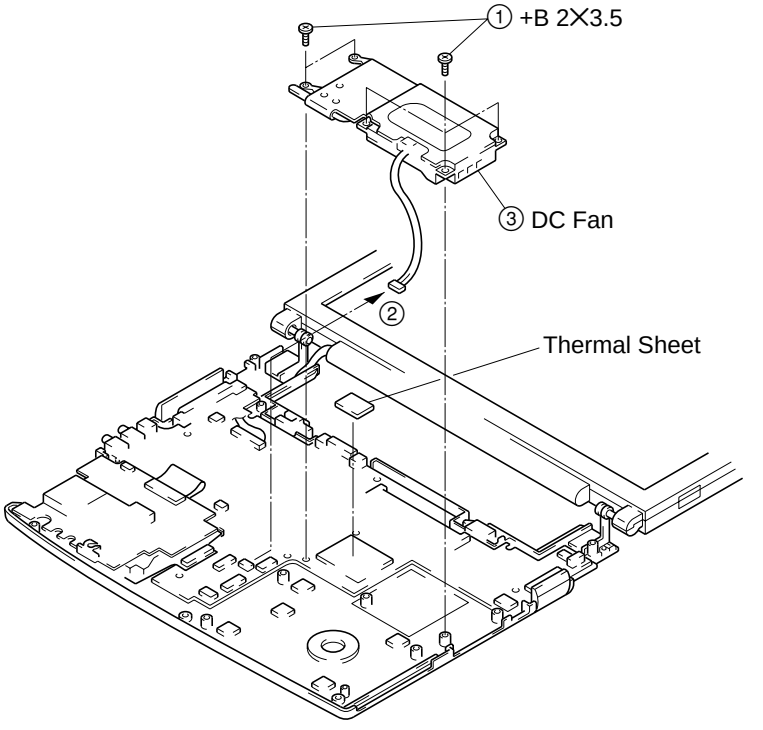

### *4. Modular jack, harness (DC jack), vanadium-lithium ion battery, and RO-30 board*



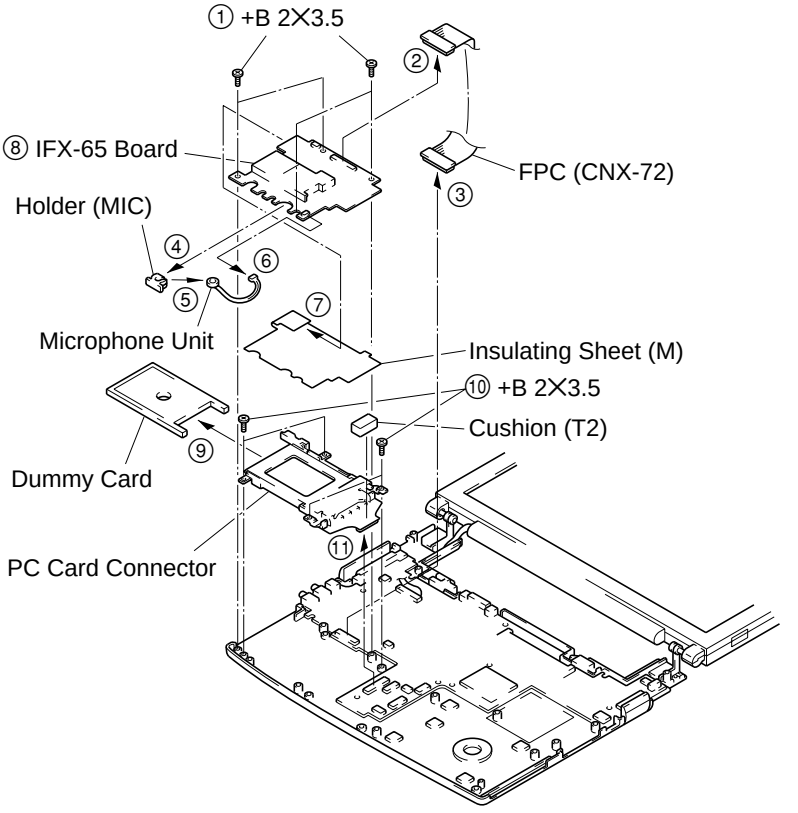
### *5. HDD 6.4 GB, and SWX-31 board*



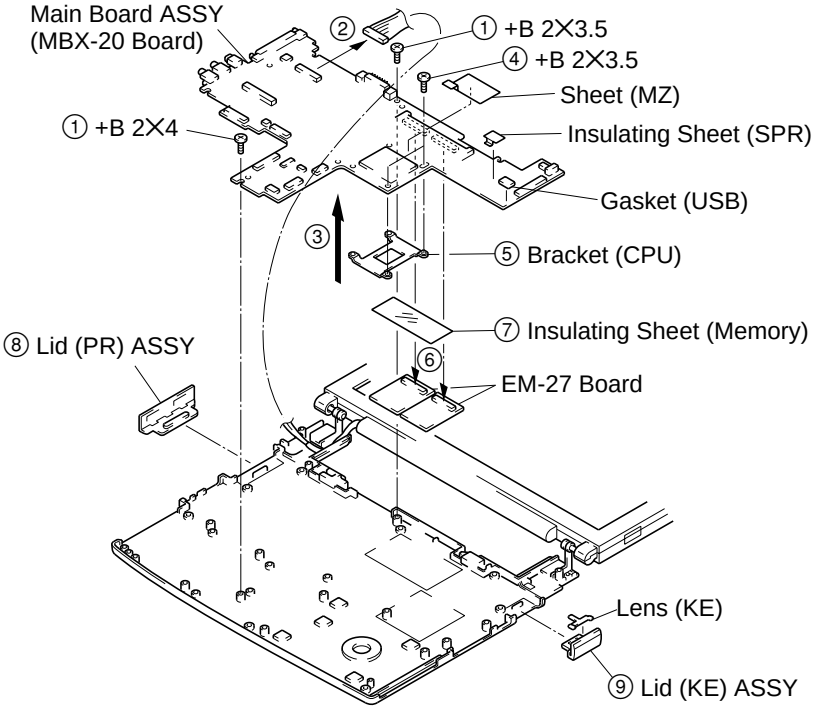

### *6. DC fan*



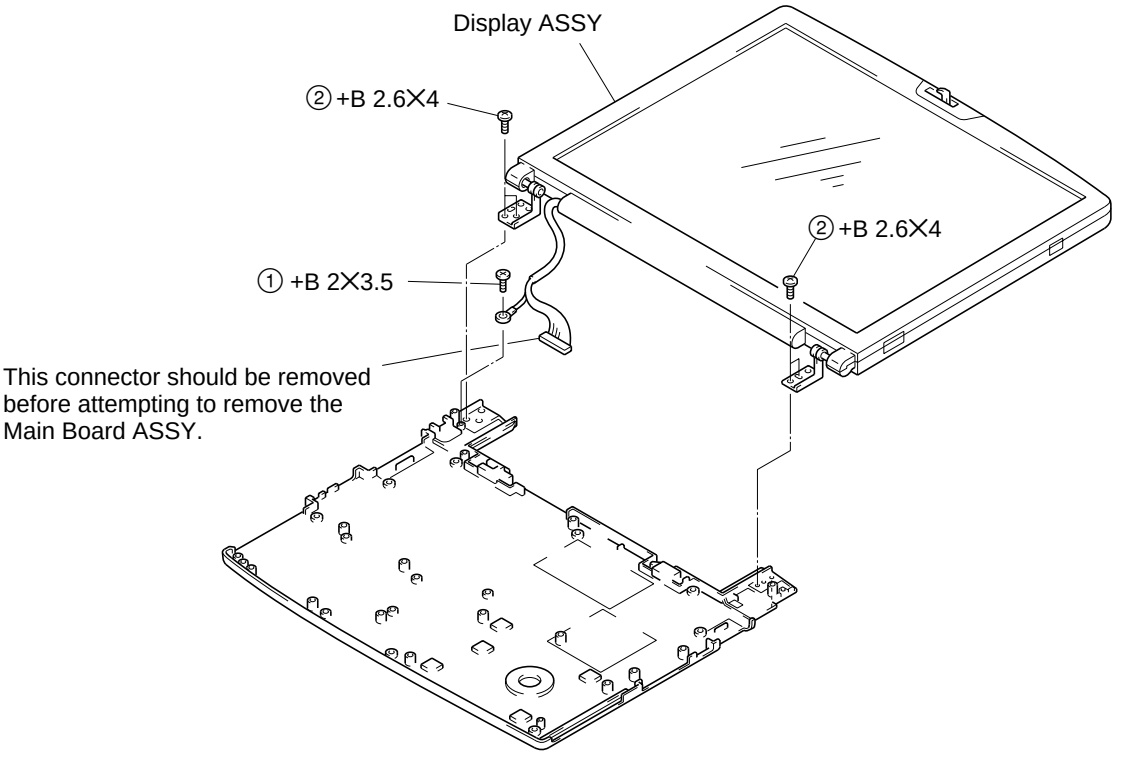
### *7. Microphone unit, IFX-65 board, and PC card connector*



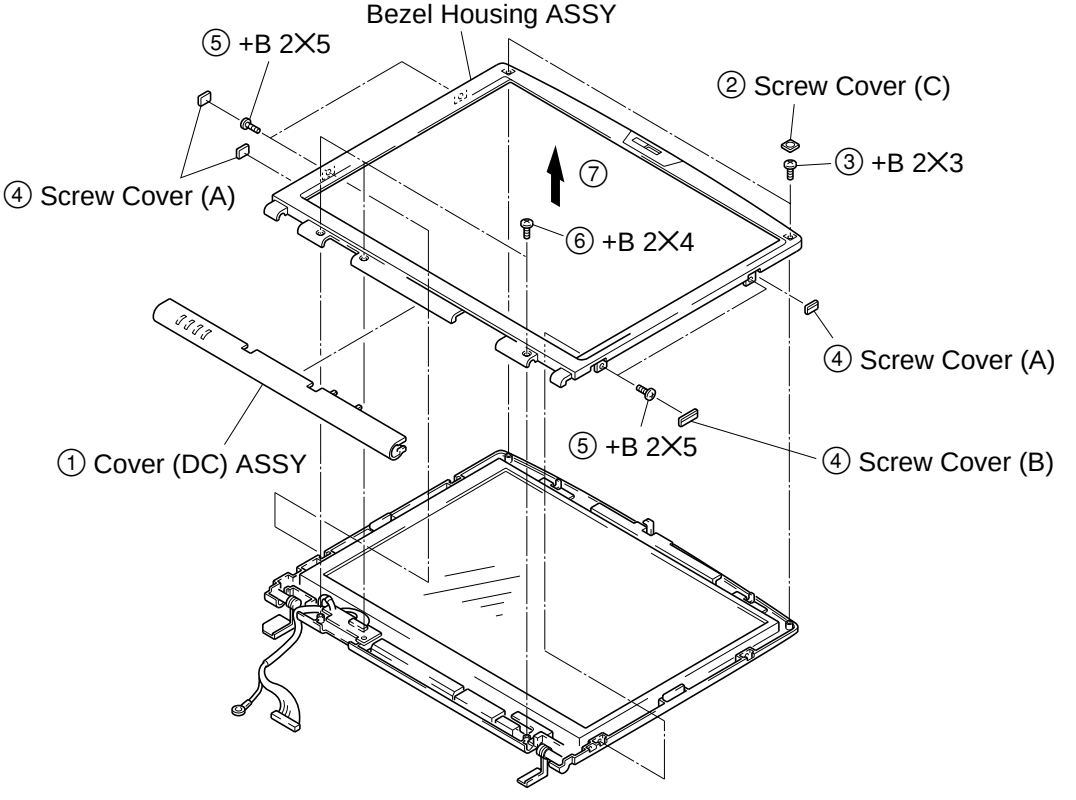

### *8. Main board assembly (MBX-20 board), and EM-29 board*



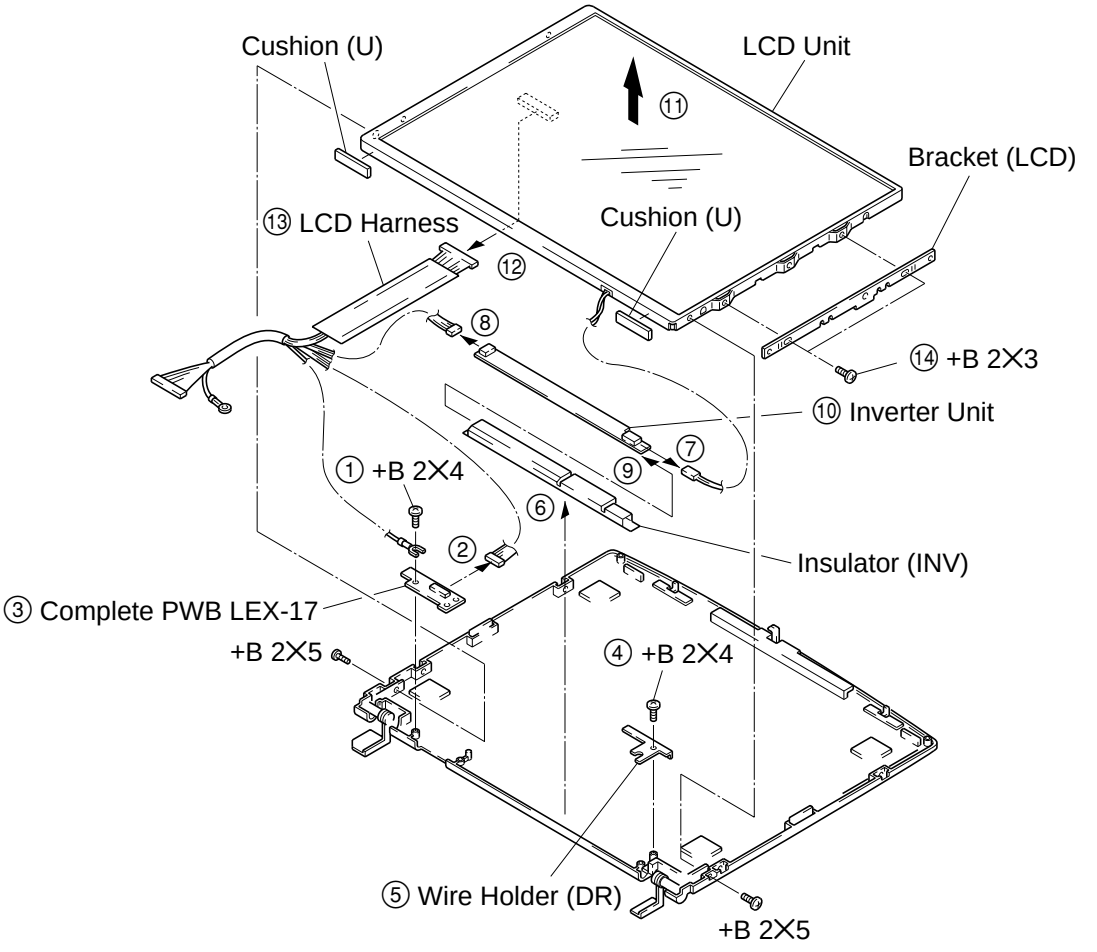
### *9. Display assembly*




### *10. Bezel housing assembly*



### *11. LEX-17 board, inverter unit, and LCD unit*



# CHAPTER 2.
# SELF-DIAGNOSTICS

## 2-1. Note

This chapter describes the items to be checked and the self-tests to be performed using the main unit, floppy-disk drive, and CD-ROM drive.

## 2-2. Necessary Tools

• PCG-Z505S/Z505SX main unit
• Floppy-disk drive
• CD-ROM drive
• Battery
• AC adaptor
• CD-ROM for self-Diagnostics
• Floppy disk for self-diagnostics (with DOS installed)
• Other tools required for the tests

## 2-3. Start-up of the Self-Diagnostics Program

Connect a floppy-disk drive, CD-ROM drive, battery and AC adaptor to the PCG-Z505S/Z505SX (hereinafter referred to as the main unit). Insert a floppy disk for self-diagnostics in the floppy-disk drive and a CD-ROM for self-diagnostics in the CD-ROM drive.

## 2-4. Diagnostics on the Setup Screen

Turn the power of the main unit on, and press F2 with the SONY logo displayed.
The Setup screen appears. Check the BIOS Version, memory capacity, CPU clock, hard-disk capacity, etc.

PhoenixBIOS NoteBIOS 4.0 Setup — Copyright. . .
Main Advanced Security Power Boot Exit
↑ ↑ ↑ ↑ ↑ ↑
The currently selected tag appears in blue with a white background.

• BIOS version
Tag [MAIN] → Item [BIOS Version] should show the correct BIOS.
• Serial number
Tag [MAIN] → Item [Serial Number] should be a correct number
• Memory capacity
Tag [MAIN] → Item [Total Memory] should show sufficient memory (at least 32MB without expansion).
• Video memory
Tag [MAIN] → Item [Video Memory] should show 1MB.
• Hard disk
Tag [Advanced] → Press Enter for Item [Primary IDE Adapter (Master)] → Press Enter for Item [Autotype Fixed Disk] will display the hard-disk information under the following items.
Check whether or not they are correct.
The remaining items are confirmed that they match the default values.
To set to default:
Tag [Exit] → Press Enter for Item [Get Default Values]
Tag [Exit] → Press Enter for Item [Exit (Save Changes)] restarts the unit.

## 2-5. Diagnostics Using the Self-Diagnostics Program

Insert a floppy disk for self-diagnostics in the floppy-disk drive, and a CD-ROM for a self-diagnostics in the CD-ROM drive.
When the power of the main unit is turned on, the system starts up from the CD-ROM, and the following screen appears.

```
Diagnostics for Service  Version 1.0.
PCG-Z505S/Z505SX

(C)1999 Sony Corporation All rights reserved.
Press any key to continue...
```

Press any key, and the Start menu will appear.

```
********** START MENU **********

1:Diagnostics for PCG-Z505S/Z505SX (Self-Diagnostics)
3:PASSWORD BYPASS          (Password Bypass)
4:QUIT MAIN MENU           (Quit)
```

Move the cursor to the desired item, and press Enter.

- Diagnostics for PCG-Z505S/Z505SX
  When Diagnostics 2 is selected from the Start menu, the screen shown below will appear.

```
********** Diagnostics for PCG-Z505S/Z505SX **********

1:Machine Configuration
2:Check System Bios Revision...
3:Check Configuration...
        :
        :
```

Once you select an item, the self-diagnostics for that item will be performed.
Pressing keys and/or listening to sounds may be required. Follow the instructions on the screen.

∗ For details on each item, see “2-6 Test items.”
(Some modifications may be made.)

When the test ends normally:

**********
PASS appears.
**********

When the test ends abnormally:

**********
FAIL appears.
**********

• PASSWORD BYPASS

If the BIOS is locked with a password and you don't know the password, use this function.
To use this function, another machine is necessary.

PASSWORD BYPASS is selected from the Start menu, the following screen appears.

```
Password Bypass Program 1.0
(C)1997 Sony Corporation All rights reserved.
Input last 7 digits of Serial number
(If serial xxxxxxxx-ooooooo,input serial number →► ooooooo)
Input serial →► number
```

Enter the last seven digits of the serial number and a temporary password will appear.

```
Bypassed pass word →► zzzzzzz
```

• QUIT MAIN MENU

Self-Diagnostics ends.

## 2-6. Test Items

• Machine Configuration

Select which PCG-Z505S/Z505SX-series main unit you are using.
As some test items operate based on this configuration, this should be the first selection made.

• Check System BIOS Revision . . .

The BIOS version will appear.
This test always ends in normal status. It's up to you to evaluate the results.

• Check Configuration . . .

Check for CPU clock or CPU ID.

• Battery test . . .

Test for charging and discharging of the battery.
If the battery is almost fully discharged or overcharged, an error may occur.

• Fan test . . .

Test for fan.

• HDD test . . .

Test for the hard-disk drive.
The recognition test is done in the start-up process with the BIOS.

• Keyboard test . . .

Test for keyboard operation.
A keyboard appears on a screen. Press the keys one by one. Pressing a function key alone will not be recognized.
Press the desired function key with the →► key.
If a disabled key is found, press the ESC key twice to end the test.

• LED test . . .

LEDs for the hard-disk drive, NumLock, CapsLock. ScrlLock, Information and Battery will light one after another, in that order.
After checking all the LEDs, press the y key.

• Memory test Group . . .

Tests for memory.
The time required for testing depends on the memory capacity.

• System test . . .

Tests for items on the mother board.
DMA, IRQ, the CPU, etc. are checked.

• Touch Pad test . . .

Test for a touch pad.
Follow the instructions on the screen. The test proceeds from left-clicking, right-clicking, touching four corners with a pen and, pushing the center with a finger, in that order.
To stop the test, press the ESC key.

• Parallel loopback test . . .

Test for a parallel port.
Connect a loopback tool to the parallel port of the port Replicator, and perform the test.

• Serial loopback test . . .

Test for a serial port.
Connect a loopback tool to the port Replicator and perform the test.

• USB test . . .

Test for an USG port.
USB tools are required.

• IrDA test Group . . .

Communication test for IrDA.
The PCG-Z505S/Z505SX for communication is required.

• Video test . . .

Test for an LCD display.
In the first half, checking that the screen is displayed within a frame and that the palette is normal is performed for your evaluation.
The second half is performed as self-diagnostics.

• Programmable power key test . . .

Test for a programmable power key.
Press it once.

• IEEE 1394 Interface test . . .

Communication test of the IEEE 1394.
A PCG-505-series unit on which Windows will run is required.

• Test for cellular phone-connector.

Cable is required.

- Aging (Short time) HDD test . . .

  Execute the test for memory and main system. It includes a test for the hard-disk drive. The data of the hard-disk drive is lost. The test takes about 4 hours.

- Aging (Long time) HDD test . . .

  Repeatedly execute the test for memory and main system. It includes a test for the hard-disk drive. The data of the hard-disk drive is lost. This test takes about 10 hours.

- Aging (Short time) test . . .

  Execute the test for memory and main system. This test takes about 15 minutes.

- Aging (Long time) test . . .

  Repeatedly execute the test for memory and main system. This test takes about 10 hours.

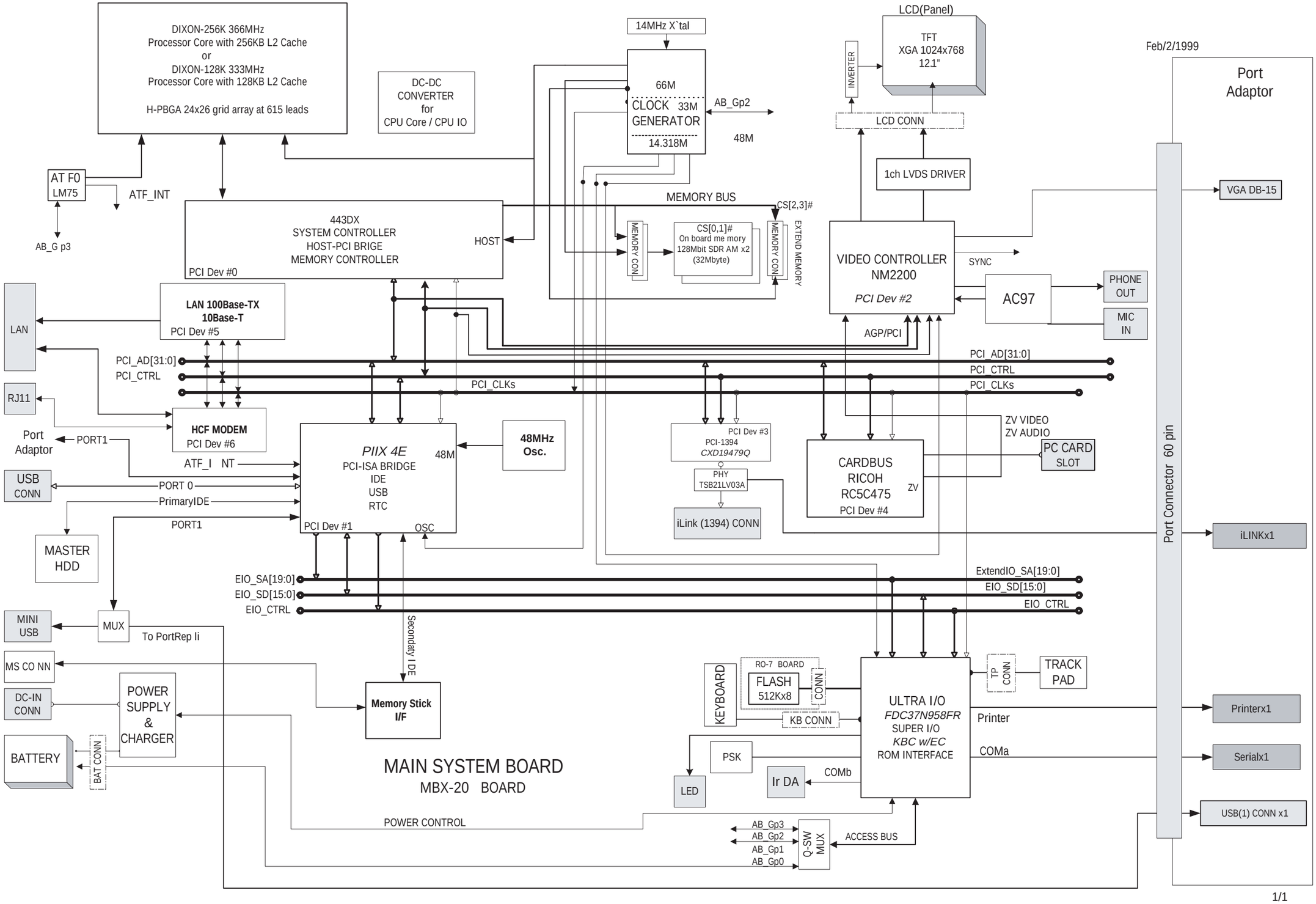
- Test to be executed in Windows environment
  - Audio test . . .
    - MIC test . . .
    - Speaker test . . .

- Modem loopback test . . .

  Perform data transmission and reception between modems.

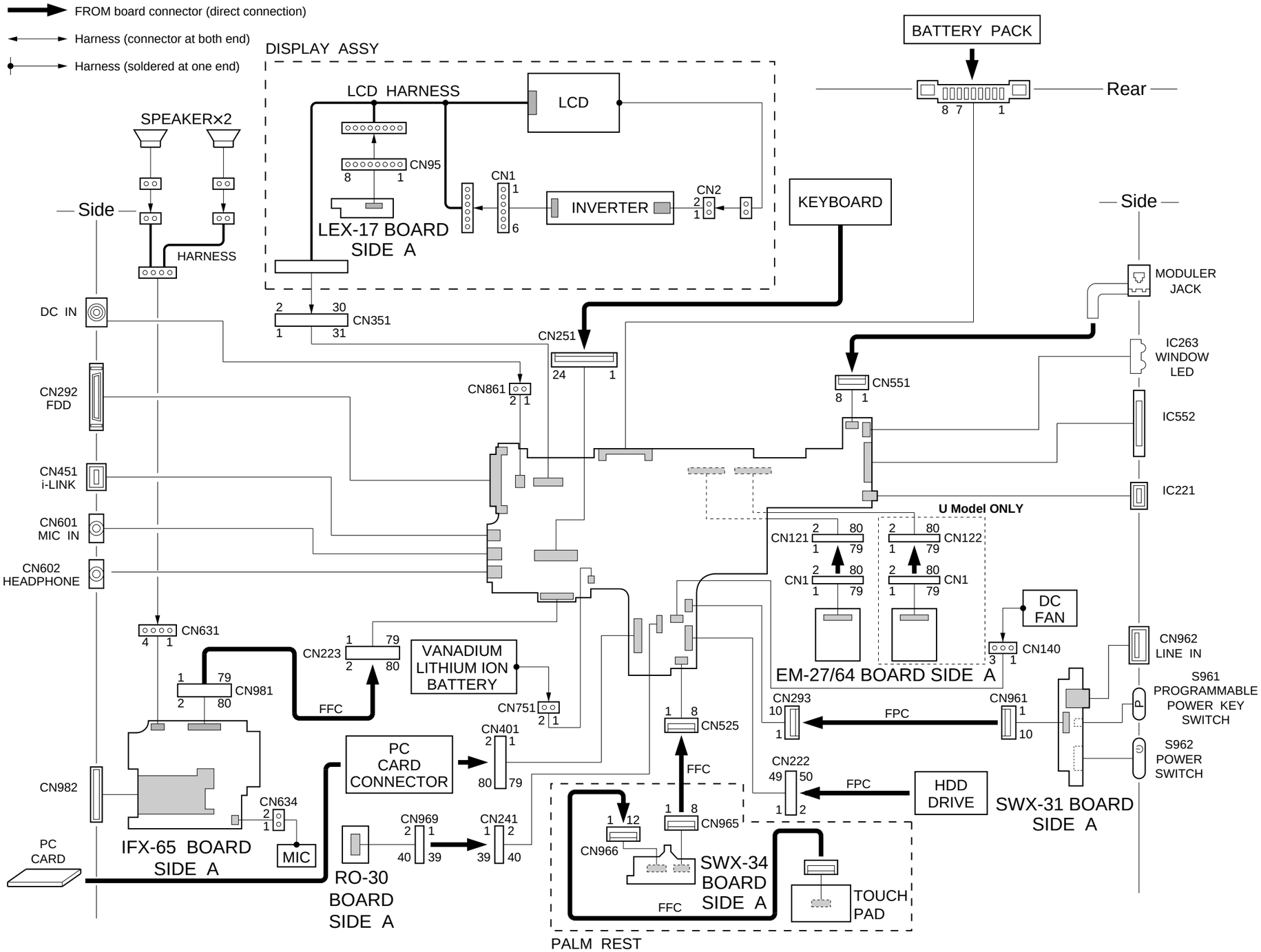
  Tool modems are required.

# CHAPTER 3.
# BLOCK DIAGRAM




1/1

# CHAPTER 4.
# FRAME HARNESS DIAGRAM



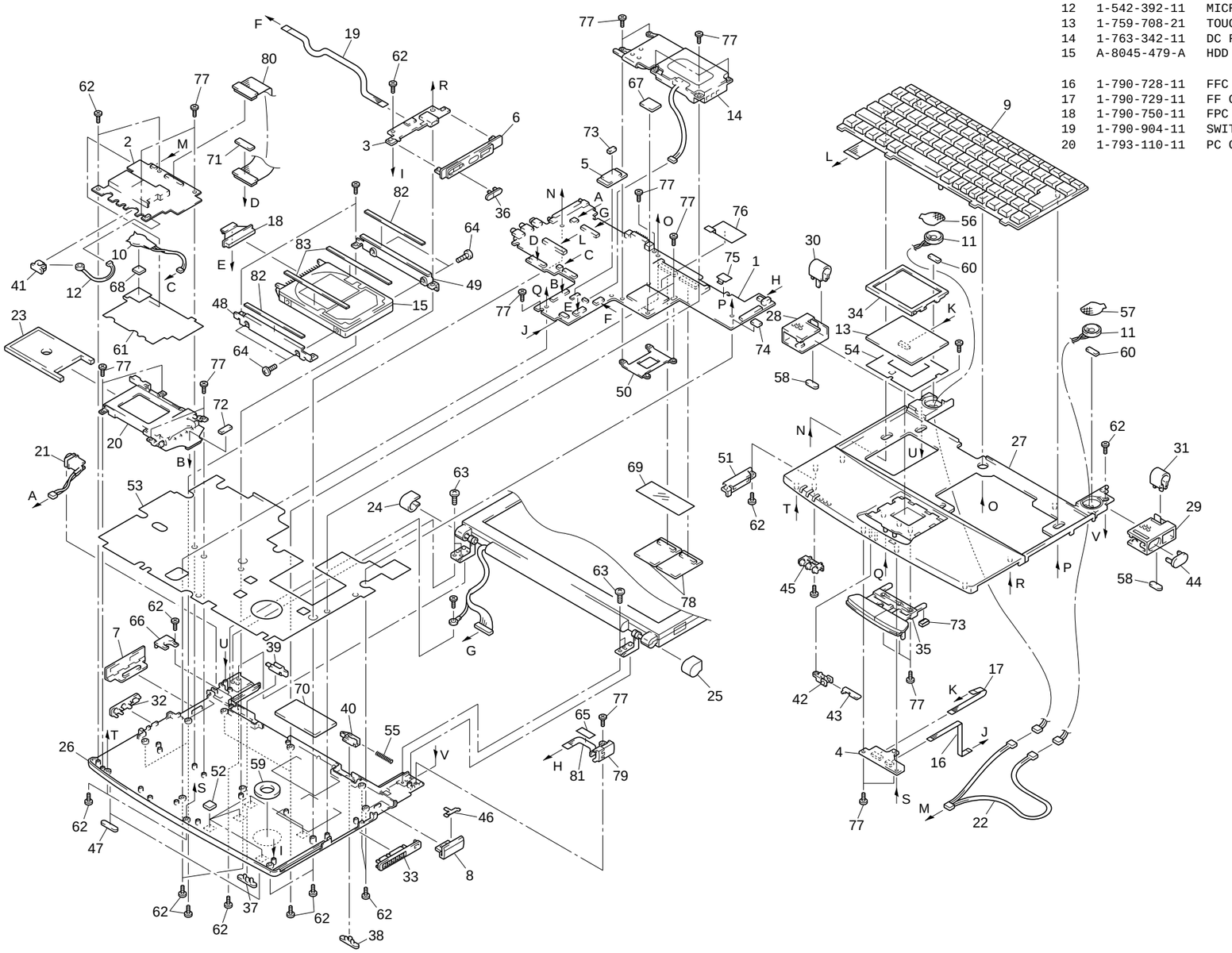
# CHAPTER 5.
# EXPLODED VIEW AND PARTS LIST

**Note:**

- Parts marked by ∗ are not normally in stock.
- Any part that has no part number is not available.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

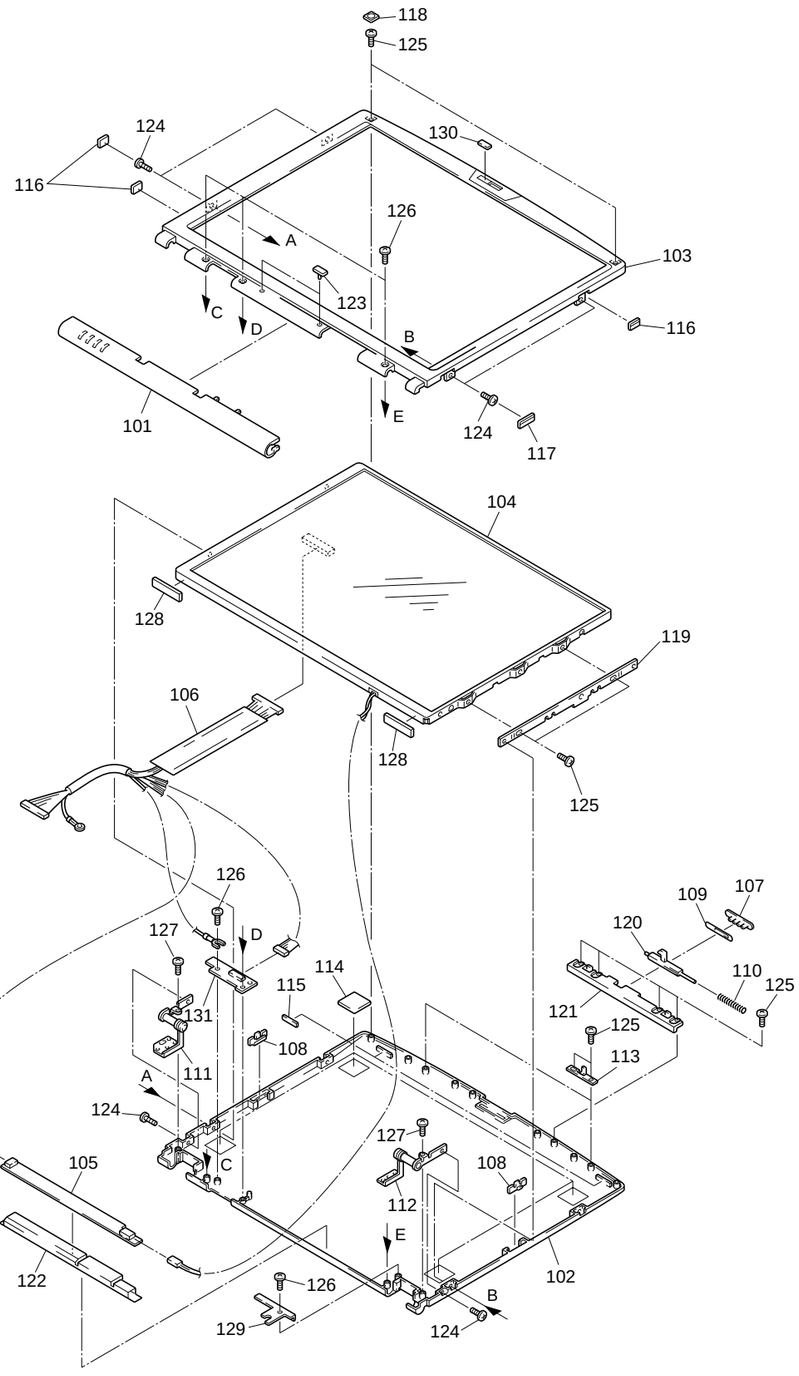
## 5-1. Main Unit




| Ref.No. | Part No. | Description |
|---|---|---|
| * 1 | A-8045-728-A | (SX)•••BOARD ASSY(366)(S), MAIN |
| | A-8045-729-A | (S)•••BOARD ASSY (333)(S), MAIN |
| 2 | A-8045-481-A | COMPLETE PWB IFX-65 (S) |
| 3 | A-8045-483-A | COMPLETE PWB SWX-31 (S) |
| 4 | A-8045-482-A | COMPLETE PWB SWX-34 (S) |
| 5 | A-8045-727-A | COMPLETE PWB RO-30 (S) |
| 6 | X-4622-155-3 | ESCUTCHEON(POWER) ASSY |
| 7 | X-4622-156-1 | LID(PR) ASSY |
| 8 | X-4622-157-1 | LID(KE) ASSY |
| 9 | 1-418-399-21 | KEYBOARD UNIT |
| 10 | 1-528-984-11 | VANADIUM LITHIUM IDN BATTERY |
| 11 | 1-529-362-11 | SPEAKER (2.0cm) |
| 12 | 1-542-392-11 | MICROPHONE UNIT |
| 13 | 1-759-708-21 | TOUCH PAD |
| 14 | 1-763-342-11 | DC FAN (5V) |
| 15 | A-8045-479-A | HDD 6.4 GB (S) |
| 16 | 1-790-728-11 | FFC CABLE(0.5mm PITCH) 8P |
| 17 | 1-790-729-11 | FF CABLE (0.5mm PITCH) 12P |
| 18 | 1-790-750-11 | FPC (HDD) |
| 19 | 1-790-904-11 | SWITCH BOARD CONNECTION FPC |
| 20 | 1-793-110-11 | PC CARD CONNECTOR |

| Ref.No. | Part No. | Description |
|---|---|---|
| 21 | 1-959-762-11 | HARNESS (DC JACK) |
| 22 | 1-959-785-12 | HARNESS (SPEAKER RELAY) |
| 23 | 4-627-811-31 | DUMMY CARD |
| 24 | 4-641-413-03 | COVER (DL) |
| 25 | 4-641-414-03 | COVER (DR) |
| 26 | 4-641-419-02 | HOUSING (BOTTOM) |
| 27 | 4-641-420-02 | HOUSING (PALM REST) |
| 28 | 4-641-421-02 | COVER (BBL) |
| 29 | 4-641-422-02 | COVER (BBR) |
| 30 | 4-641-423-03 | COVER (BPL) |
| 31 | 4-641-424-03 | COVER (BPR) |
| 32 | 4-641-431-02 | ESCUTCHEON (AU) |
| 33 | 4-641-433-02 | ESCUTCHEON (F) |
| 34 | 4-641-434-02 | ESCUTCHEON (PAD) |
| 35 | 4-641-435-02 | BUTTON (PAD) |
| 36 | 4-641-437-01 | KNOB (POWER) |
| 37 | 4-641-438-01 | KNOB (BL) |
| 38 | 4-641-439-01 | KNOB (BR) |
| 39 | 4-641-440-02 | HOLDER (BL) |
| 40 | 4-641-441-01 | HOLDER (BR) |
| 41 | 4-641-443-03 | HOLDER (MIC) |
| 42 | 4-641-444-01 | HOLDER (SW) |
| 43 | 4-641-445-01 | PLATE (SW) |
| 44 | 4-641-446-01 | WINDOW |
| 45 | 4-641-447-01 | LENS (F) |
| 46 | 4-641-448-01 | LENS (KE) |
| 47 | 4-641-449-01 | FOOT (F) |
| * 48 | 4-641-461-01 | BRACAKT (HDDF) |
| * 49 | 4-641-462-01 | BRACAKT (HDDR) |
| * 50 | 4-641-463-01 | BRACAKT (CPU) |
| 51 | 4-641-465-01 | ESCUTCHEON (MS) |
| 52 | 4-641-467-01 | CUSHION (HDD) S |
| * 53 | 4-641-468-02 | INSULATING SHEET (BOTTOM) |
| * 54 | 4-641-469-01 | INSULATING SHEET (PAD) |
| 55 | 4-641-779-01 | SPRING,COMPRESSION (BT) |
| 56 | 4-641-780-02 | COVER (SPL) |
| 57 | 4-641-781-02 | COVER (SPR) |
| 58 | 4-641-782-01 | FOOT (R) |
| 59 | 4-641-837-01 | CUSHION (HDD) C |
| 60 | 4-641-838-01 | CUSHION (SP) |
| 61 | 4-641-839-03 | INSULATING SHEET (M) |
| 62 | 7-621-771-06 | +B 2X5 |
| 63 | 7-621-773-86 | +B 2.6X4 |
| 64 | 7-682-145-01 | +P 3X4 |
| 65 | 4-635-952-01 | INSULATING SHEET (WJ) |
| 66 | 4-641-442-03 | HOLDER (WIRE) |
| 67 | 4-641-471-01 | THERMAL SHEET |
| 68 | 4-642-126-01 | CUSHION (BB) |
| 69 | 4-642-127-01 | INSULATING SHEET (MEMORY) |
| 70 | 4-642-128-01 | CUSHION (MEMORY) |
| 71 | 4-642-129-01 | CUSHION (FPC) |
| 72 | 4-642-443-01 | CUSHION (T2) |
| 73 | 4-642-444-01 | CUSHION (T3) |
| 74 | 4-642-447-01 | GASKET (USB) |
| 75 | 4-642-448-01 | INSULATING SHEET (SPR) |
| 76 | 4-642-449-01 | SHEET (MZ) |
| 77 | 4-641-876-01 | +B 2X4 |
| 78 | A-8045-492-A | EM-27/64 ASSY |
| 79 | 1-793-007-11 | MODULAR JACK |
| 80 | 1-790-751-11 | FPC (CNX-72) |
| 81 | 1-790-669-11 | FPC (CNX-73) |
| 82 | 4-642-643-01 | CUSHION (BRACKET) |
| 83 | 4-642-685-01 | CUSHION (HBB) |

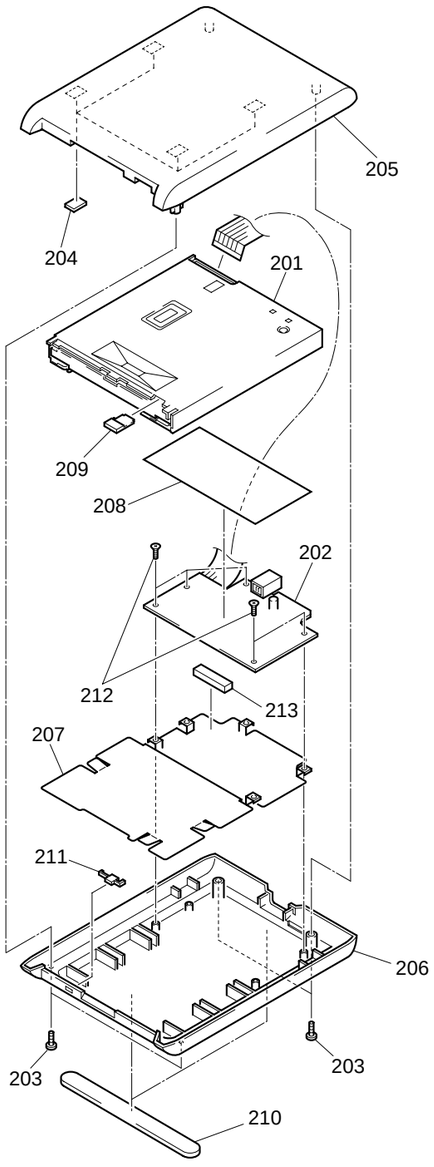
## 5-2. Display Unit




| Ref.No. | Part No. | Description |
|---|---|---|
| 101 | X-4622-146-1 | COVER (DC) ASSY |
| 102 | X-4622-148-2 | HOUSING (DISPLAY) ASSY |
| 103 | X-4622-149-1 | HOUSING (BEZEL) ASSY |
| 104 | A-8045-480-A | LCD UNIT (12.1" TFT XGA) (S) |
| 105 | 1-418-398-11 | INVERTER UNIT |
| 106 | 1-959-716-11 | LCD HARNESS (31 PIN) |
| 107 | 4-639-580-01 | KNOB (LATCH) |
| 108 | 4-639-588-01 | LOCK (D) |
| 109 | 4-639-622-01 | SPACER (LATCH) |
| 110 | 4-639-623-01 | SPRING, COMPRESSION (LATCH) |
| 111 | 4-641-415-01 | TILT UNIT (L) |
| 112 | 4-641-416-01 | TILT UNIT (R) |
| 113 | 4-641-452-01 | LOCK (T) |
| 114 | 4-641-453-02 | CUSHION (LCD) |
| 115 | 4-641-454-02 | CUSHION (T) |
| 116 | 4-641-455-01 | SCREW COVER (A) |
| 117 | 4-641-456-01 | SCREW COVER (B) |
| 118 | 4-641-457-01 | SCREW COVER (C) |
| * 119 | 4-641-458-01 | BRACKET (LCD) |
| 120 | 4-641-459-01 | LEVER LATCH |
| 121 | 4-641-460-01 | HOLDER LATCH |
| 122 | 4-641-738-02 | INSULATOR (IVT) |
| 123 | 4-641-828-02 | CUSHION (DC) |
| 124 | 7-621-771-06 | +B 2X5 |
| 125 | 7-621-772-08 | +B 2X3 |
| 126 | 7-621-772-18 | +B 2X4 |
| 127 | 7-621-773-86 | +B 2.6X4 |
| 128 | 4-642-146-02 | CUSHION (U) |
| 129 | 4-642-147-01 | WIRE HOLDER (DR) |
| 130 | 4-639-778-02 | CUSHION (LATCH) |
| 131 | A-8045-485-A | COMPLETE PWB LEX-17 ASSY (S) |


5-2

## 5-3. FDD 1000 Unit (S)




| Ref.No. | Part No. | Description |
|---|---|---|
| 201 | 1-475-933-11 | FDD |
| 202 | 1-761-123-11 | USB (PWB) |
| 203 | 3-948-339-31 | No.O P2 TAPPING B2 |
| 204 | 4-636-398-01 | CUSHION |
| 205 | 4-639-030-02 | CASE (TOP) |
| 206 | 4-639-031-01 | CASE (BOTTOM) |
| 207 | 4-639-032-01 | SHIELD PLATE |
| 208 | 4-639-033-01 | INSULATING SHEET |
| 209 | 4-639-034-02 | PUSH BUTTON |
| 210 | 4-639-035-01 | FOOT |
| 211 | 4-639-036-01 | INDICATOR |
| 212 | 4-639-147-01 | +P 2X5.5 (B TIGHT) |
| 213 | 4-639-300-01 | CUSHION |

ACCESSORIES & PACKING MATERIALS

| Part No. | Description |
|---|---|
| 1-528-983-31 | BATTERY PACK(H BATTERY) |
| A-8044-721-A | FDD UNIT ASSY |
| *1-777-926-31 | CONNCTING CORD |
| 1-782-614-31 | POWER SUPPLY CORD |
| 1-790-777-11 | UBS CONVERTER CABLE |
| 1-959-869-11 | RJ45 HARNESS |
| ⚠1-418-388-12 | AC ADAPTER |
| 4-639-400-03 | WARRANTY ADDENDUM |
| 3-867-274-11 | WELCOME MAT |
| 3-867-276-11 | READ ME FIRST |
| 3-867-275-11 | USER GUIDE |